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JPRS Report

Epidemiology

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Epidemiology

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ANGOLA

Moxico Measles Epidemic Kills 80 Children

MB2006065090 KUP(Clandestine) in English to Southern and Central Africa 0600 GMT 20 Jun 90

[Text] Jamba—An outbreak of measles among the Angolan population in Sakassanje, Chingue, and Ceramica villages near Luena, the provincial capital of Moxico, has claimed the lives of at least 80 children over the past two weeks.

KWACHA UNITA PRESS sources in Luena disclosed today that the deaths of the children were first reported June 1 in Chingue and Ceramica villages where three and 23 deaths were respectively registered.

A few hundred of Angolans who have been arriving over the last few years from neighbouring countries, more especially Zambia and Zaire, are resettled in camps at Sakassanje, Chingue, and Ceramica. These resettlement camps are said to have been turned into MPLA [Popular Movement for the Liberation of Angola] army recruitment grounds. Over the last few months, dozens of the repatriated Angolan men had been airlifted from the camps to military training camps in Luanda before being sent to war fronts.

The families of the recruited men are reportedly given inadequate financial assistance and recent reports talk of acute shortage of medicines in the health centres established there.

BOTSWANA

Official Notes 1989 Bubonic Plague Epidemic Over

MB2106103990 Gaborone Domestic Service in English 1900 GMT 20 Jun 90

[Text] The bubonic plague which hit the Boteti area last year, affecting at least 105 people, is reported to be over.

This was confirmed by the permanent secretary in the ministry of health, Dr. Edward Maganu, today.

The first human case of the plague was diagnosed in October last year, and the last case in March this year. The worst affected villages were Xhumu, which reported 36 cases; Rakops with 27; and Mopipi and Toromoja.

The plague affected all age groups equally. Twenty-seven cases were recorded among children under five, 31 under the age of 10, and 28 in the 15-year-old bracket.

Dr. Maganu said the government was taking all necessary precautions to prevent the recurrence of the epidemic. He said steps were being taken to predict the occurrence of human cases and prevent them, if possible.

LIBERIA

Call for 'Immediate' Cholera, Measles Vaccination Campaign

AB0207093090 Monrovia Radio ELWA in English 0709 GMT 2 Jul 90

[Text] The chief medical officer of Liberia, Dr. Robert Kpoto, has called for the immediate start of a campaign of vaccination against cholera and measles. He said the overcrowding of people displaced by the fighting and pollution of water supplies had created a risk of epidemics. The fighting at Monrovia's main water supply area, the White Plains plants, has left the city without its usual supply since Wednesday [27 June]. Residents have had to rely principally on well water and sometimes rain water. In some cases the well water is unfit for drinking. Power supplies have also been cut and food shortages have worsened.

MOZAMBIQUE

380 Balama District Children Die From Measles

MB1406190490 Maputo Domestic Service in Portuguese 1730 GMT 14 Jun 90

[Text] Over 380 children have died of measles at (Cuecue) administrative post, Balama District, Cabo Delgado Province.

Radio Mozambique reports from Pemba that over 13,000 peasants at (Mbire) administrative post, Balama District, face serious food shortages due to low production this year, following the destruction of crops by rodents and snails.

Malaria Kills 'Dozens' in Nampula Province

MB2406125590 Maputo Domestic Service in Portuguese 1030 GMT 24 Jun 90

[Text] Dozens of children have died of malaria at the Isipi administrative location in Nampula Province's Mecuburi District. Isipi's executive council chairman told our correspondent that there were cases of three children dying daily due to a lack of medical care. He said the closest health post was 50 km from Isipi.

Cholera Cases on Increase in Tete, Beira

Special Team Sent

90AF0234Z Maputo NOTICIAS in Portuguese 14 May 90 p 1

[Text] To help conquer the outbreak of cholera in Tete province, the Ministry of Health has sent a reinforcement team from the capital city, made up of an epidemiologist, 16 nurses, medicine, and assorted medical supplies, according to a communique issued on 11 May by the office of epidemiology.

We transcribe the text of the communique in its entirety:

Beginning on 30 April 1990, a cholera epidemic broke out in some localities in Tete province, and especially in its capital city. This disease is transmitted by drinking contaminated water or by eating contaminated food, and it is associated with unsanitary health conditions. In Tete, these conditions have been exacerbated by the torrential rains of 27 April. In addition to these factors, it is important to stress the great movement of people who are coming from the neighboring countries which have also been affected by this epidemic. All of these factors could have contributed to and been the cause of this epidemic outbreak.

Through 11 May 1990, 368 positive cases and 20 deaths have been recorded. The situation is stabilizing.

In the face of this situation, the Ministry of Health has taken immediate measures. A provincial commission to combat the epidemic has been formed, and a First Aid Bank and two infirmaries to take care of the sick have been organized. A reinforcement team has been sent from the capital city made up of an epidemiologist, 16 nurses, medicine, and medical supplies.

Since the beginning of the outbreak, we have been depending on the support of international organizations that are working in Mozambique: WHO [World Health Organization], UNICEF [United Nations Children's Fund], UNDRHO [Office of the United Nations Disaster Relief Coordinator], CVM [Mozambique Red Cross], ISCOS [expansion unknown], the Belgian chapter of "Doctors Without Borders," and World Vision.

In spite of the fact that the measures necessary to guarantee appropriate treatment for those who are ill have been taken, it is important to stress that the outbreak of cholera is not controlled just with curative measures. The outbreak of cholera is controlled through public health measures: drinking potable water, hygienic handling of food, proper disposal of feces, removal of garbage, fighting flies, and other sanitary measures.

In order for this fight to be successful, it is necessary to have the support and participation of the political authorities, the ODM's [Mass Democratic Organizations], and the people in general.

Urgent Measures Required

*190AF0258D Maputo NOTICIAS in Portuguese
25 May 90 p 3*

[Text] Cholera will continue for a long time to destroy human lives in Tete, unless measures are taken to obviate the conditions which are contributing to the outbreak, such as the inefficient sewer system which ends at the Zambesi River with no provision for water treatment and a general housecleaning of the city itself. The present outbreak which occurred on 30 April resulted in 24 deaths and a total of 668 cases verified as being positive. This information was given yesterday to

NOTICIAS by a source representing the Ministry of Health and given the responsibility of making an epidemiological investigation of the case.

The health officials associated with the epidemiological investigation of the case state that the outbreak of cholera in Tete is directly connected with the constant movement of displaced persons between Mozambique and Malawi.

According to the representative of the Ministry of Health, Tete labors under conditions which lead to outbreaks of cholera; this was the case last year and the same holds true this year, with the possibility of an even greater incidence of the disease in the future.

The informant then went on to say that conditions are ripe for an increase in cholera in Tete due to two factors: the sewer system which terminates at the Zambesi River with no provision for water treatment and a general housecleaning of the city itself.

The city is located on a rocky and hilly terrain and this makes it difficult to construct latrines and sanitary landfills. This situation requires considerable support on the part of Tete's Executive Council in making arrangements for the removal of garbage and miscellaneous filth which accumulates in the districts and throughout the city.

Representatives of the health organizations, making an on-site visit to Tete to observe conditions first-hand, recognize that Tete's provincial government is not capable of resolving those problems and that the responsibility should therefore be in the hands of the country's central government.

Beira Outbreak Detected

*MB1406135090 Maputo Domestic Service in Portuguese
1030 GMT 14 Jun 90*

[Text] A Health Ministry source told Radio Mozambique a cholera outbreak was detected in Beira City this week.

A total of 16 cholera cases, including two deaths, have so far been registered in the city.

The Health Ministry source also reported 743 cholera cases and 29 deaths have so far been registered in Tete Province since the outbreak was detected last month.

Deaths Occur

*MB2906125490 Maputo Domestic Service in Portuguese
1030 GMT 29 Jun 90*

[Text] A source at the Health Ministry told Mozambique Radio that another 11 cases of cholera were diagnosed in Beira over the past two days. A total of 86 cases of cholera and 20 deaths have been registered in Beira to date.

As for Tete Province, 30 people have so far died while over 766 cases of cholera have been registered.

More Cases Registered

MB0307174590 Maputo Domestic Service in Portuguese 1400 GMT 3 Jul 90

[Text] Another seven cases of cholera were registered in Beira City over the past three days. Thus, the total number of cholera cases in the city now stands at 94. A source from the Health Ministry revealed today that the death toll which had been wrongly reported now stands at 19. In Tete Province, the number of cholera cases and deaths remains unchanged.

49 Deaths Recorded

MB0907130190 Maputo Domestic Service in Portuguese 1030 GMT 9 Jul 90

[Text] Another 15 cholera cases have been recorded in Beira city over roughly one week, increasing to 109 the number of cholera cases. The number of cholera cases recorded in Tete city remains 774.

Cholera has killed 30 people in Tete and 19 in Beira.

A source in the Ministry of Health has said that there are no confirmed cholera cases in other Mozambican provinces.

SOUTH AFRICA

Tsetse Fly Epidemic in Zululand Infects 40,000 Cattle

MB2706140990 Johannesburg THE STAR in English 27 Jun 90 p 14

[Text] Durban—About 40,000 head of cattle are at risk as a result of the new outbreak of the cattle scourge nagana, caused by the tsetse fly, near the Hluhluwe Game Reserve in Zululand.

At present 6,000 to 10,000 cattle are infected and emergency steps are being taken by the KwaZulu Government to treat the animals.

These cattle represent the life savings of thousands of people, according to B. McCulloch, KwaZulu's Director of Veterinary Services.

Good drugs for treating nagana were also readily available. Usually one injection was all that was needed for complete recovery.

Max Bachmann, a veterinarian who has had extensive experience of tsetse fly eradication campaigns, said that infected cattle were found from the edge of Lake St Lucia westwards along the drainages of the Hluhluwe, Nyalazi and Mzinene Rivers, around the eastern, northern and western edges of the Hluhluwe Game Reserve.

He said that humans were not in danger of contracting sleeping sickness, as the particular fly responsible did not occur in South Africa.

Dr. Bachmann said the present situation, although serious, was not a repeat of the disasters of the 1920's to 1950's.

There was little likelihood of the disease spreading to other parts of South Africa, he said.

Dr. McCulloch said that in some heavily infected areas all the cattle would probably be injected while in others only those identified as being infected would be treated.

O. Borquin, director of species control of the Natal Parks Board, said that the board had discussed the outbreak with the KwaZulu and Southern African veterinary departments as well as the Veterinary Association.

The board would do everything it could to help control the disease.

At this stage it was not possible to say how the disease might affect management of the reserves, but it was believed that no costly or ecologically disruptive actions would be needed.

Effective Therapy for Hepatic Necrosis Developed

*OW1506131790 Beijing XINHUA in English
0936 GMT 15 Jun 90*

[Text] Shenyang, June 15 (XINHUA)—The Chinese Medical Sciences University has developed a therapy for hepatic necrosis which is said to have greatly reduced the mortality rate.

Dong Xiangjia a specialist in charge of the project, said that hospitals have treated 147 patients with the new therapy and 90 have so far survived.

The expert said that hepatic necrosis claimed a death rate of 80-90 percent worldwide before the 1980s, with a mortality rate of 70-80 percent in China.

At the beginning of the 1980s the State Science and Technology Commission designated the study of hepatic necrosis as a key research project and Chinese scientists were urged to lower the mortality below 75 percent.

Dong and other medical workers in Shanghai, Tianjin and Chongqing researched for five years with such traditional medicines as amino acids, blood products, thymic peptide, pancreatic glucagon and insulin, and succeeded in lowering the death rate to between 42.4 percent and 54.54 percent.

They also found that macrophage in a patient's blood, induced by endotoxin, produces a protein which kills normal cells. The discovery has changed the traditional concept that hepatic necrosis is caused by immunologic injury.

In the following years, they adopted a new therapy in accordance with the discovery. They treated patients with injections of pig fetus liver, traditional Chinese medicine and Prostaglandin E, which has further reduced the death rate to 33.3-36 percent.

New Advances in Hepatitis Research**Hepatitis C Virus Found**

90WE0153A Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY DAILY] in Chinese 31 Jan 90 p 2

[Article by Su Lianfeng [5685 6647 1496]: "Hepatitis Research in China Sees New Advances, First Evidence of Hepatitis C Viral Disease Reported"]

[Text] A hepatitis study conducted by a research team led by Professor Tao Qimin [7118 0366 2404] of the Hepatitis Research Institute of the People's Hospital of Beijing Medical University collaborating with the blood bank of the Japan Red Cross, after a nearly 6-month intensive investigation in northern China, has detected antibodies of hepatitis C virus in people of high-risk groups. This is the first reported evidence of the existence of a newly recognized virus—the hepatitis C virus in China. It was also established in this study that people of certain high-risk categories are more susceptible to the attack of this virus.

At present, there are two detectable viral agents which are known to cause hepatitis, namely the hepatitis A virus and the hepatitis B virus. It has been observed that a significant portion of patients have developed either acute or chronic hepatitis following the infusion of blood or blood products, although the blood had been screened for both hepatitis A and hepatitis B viruses. Because the hepatitis C virus is present in blood at such low levels that it easily escapes the detection of common laboratory tests, recipients of blood transfusions are often left in a predicament vulnerable to the infection of this viral agent, helpless and unpreventable. This kind of live inflammation has been known for sometime as post-blood-transfusion, non-type A and non-type B hepatitis.

Today, the gene sequence of the hepatitis C virus has been determined only by researchers in the United States and in Japan, using advanced molecular biological technologies and state-of-the-art instruments. They have developed an immunoassay for hepatitis C that detects the antibodies. The People's Hospital Hepatitis Research Institute, through its study of nearly 400 different cases of hepatitis from various regions in the nation, has concluded that hepatitis C virus is frequently responsible for post-blood-transfusion liver infections. Hepatitis C often develops into chronic hepatitis and in some cases, cirrhosis and liver cancer may follow. The Hepatitis Institute is actively studying possible treatments of this disease using interferon and Chinese herb medicines.

Immunization Program Underway

*54004070 Hong Kong HONG KONG STANDARD
in English 9 Apr 90 p 6*

[Text] A huge immunization programme against hepatitis B is underway in Shanghai, said a Chinese expert on the disease.

Professor Duan Shu-cheng of Shanghai Medical University said parents had to pay for the shots.

The scheme is working better in the urban than in the rural areas said the professor, who is chairman of the National Association of Viral Hepatitis in Children.

She said there were logistical and economic problems in providing the service to the country's vast population.

She said under the one-child-per-family policy parents in the urban areas could afford the immunization but in rural areas where families still had larger families the cost often proved prohibitive.

She said there was a need for a long term follow-up programme with booster shots.

The professor, who has studied viral hepatitis for 26 years, said as yet it is unknown how long the Hepatitis B vaccine provides immunity to children born of mothers with the virus.

She said it had been proved that the vaccine was effective and safe but follow up shots were necessary to provide immunity.

Prof Duan's team worked mostly with vaccines produced in China which had greatly improved in recent years.

Children born of both hepatitis negative and positive mothers were immunized immediately after birth.

Prof Duan said that some doctors used to think that Hepatitis B might be an hereditary or genetic disease but this was no longer true.

She said that such practices as the repeated use of needles in hospitals and crowded living conditions might have been contributing factors to the high incidence of the disease.

She said it was still necessary to isolate patients who had Hepatitis B although this was not done in the West.

Treatment Approaches World Level

54004814A Beijing CHINA DAILY in English
18 May 90 p 3

[Text] China is approaching an advanced world level in the diagnosis and treatment of virulent hepatitis.

The Shanghai-based Liberation Daily, in a report on the Sixth National Academic Exchange on Virulent Hepatitis held in Shanghai, states that China has so far accomplished scientific researches at current world levels, and has developed the capacity to turn out most of the anti-hepatitis pharmaceuticals by itself including the Hepatitis B test and all kinds of vaccines.

Chinese medical experts also successfully conducted transplant operations for eight patients with cirrhosis of the liver.

Some other advanced techniques have also been developed in China to treat serious hepatitis and have greatly decreased its death rate.

According to the paper, virulent hepatitis, with the highest incidence rate among virulent epidemic diseases in China, was a serious threat to the nation's health and survival.

Five different types of virulent hepatitis has now been tested in the country including A and B.

The first prevailed widely in the southern part of the country in Shanghai and Zhejiang in 1988 and caused many deaths.

According to incomplete statistics, the country at present has about 120 million people who are carrying the

Hepatitis B virus, some of whom might develop chronic diseases such as cirrhosis and cancer of the liver.

Each year, more than 1 million Chinese are supposed to be infected with chronic liver diseases.

Besides that, the country has more than 30 million patients with such chronic diseases.

And each year, at least 300,000 people may die from liver cancer.

The cost is figured at over 50 billion yuan (\$10.62 billion) annually because of the various hepatitis diseases.

Investigations in major cities including Shanghai and Beijing also show that more and more adults are exposed to Hepatitis A.

Acute Schistosomiasis Outbreak in Anhui

90WE0153B Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY DAILY] in Chinese 31 Jan 90 p 2

[Article by Wang Baiqing [3076 2672 1987] of the Parasitic Disease-Control Institute of Anhui: "The Causes and Control of the Outbreak of Acute Schistosomiasis"]

[Text] Recent results of on-site investigations and morbidity reports have indicated that since the beginning of this summer, acute schistosomiasis has, with various degrees of severity, spread across 17 counties, 4 cities and 24 production units such as the farms at Puji Yu [2528 3444 0962], Wan He [4111 3109] and Huayang He [5478 7122 3109] in Anhui. This disease has taken a severe form in some areas where sudden epidemic eruptions were observed. It was estimated that as of the end of last October, some 4,000 people had already been infected by acute schistosomiasis, a number higher than the total of reported cases of this disease in the 10-year period from 1979 to 1988. The defensive line against the attack of acute schistosomiasis parasites, comprised of the counties and cities dotting the northern and southern banks of a 765-kilometer stretch along the Chang Jiang [i.e., the Yangtze River] in Anhui has already been breached by the spreading parasites; the situation is very grave. A general survey of the available data and information has revealed that the following causes are largely responsible:

1. In 1988 in the region along the Chang Jiang, the summer rain delayed well into autumn and the rainy season lasted longer than normal; therefore, the high water did not ebb until much later. Furthermore, the spring rain arrived earlier in 1989, bringing with it wet weather and low temperatures. Consequently, snail-control measures could not be carried in time in two consecutive seasons; this created a favorable condition for snails to breed, grow and spread. This, in turn, enabled trematodes to infect a much greater area.

2. In recent years, strategic planning for control of schistosomiasis in the lake region has failed to concentrate on primary targets; many prevention and control measures can only be described as inadequate.

3. Disease control in the lake region involves broad areas and long stretches of land. Furthermore, the time span suitable for effective preventive snail control is relatively short. The most opportune time is the period of 20 to 30 days in March and April each spring. However, during this period, it is very difficult for the insufficient number of schistosomiasis-control crews with little equipments to thoroughly cover all the vital targets in high-risk zones.

4. For years, little has been done to eliminate schistosomiasis from domestic animals, especially from oxen in the disease infected area. The failure to actively carry out the control of live-stock schistosomiasis constitutes a great health threat to local residents.

5. With the shortfall of funding for disease control, worn-out equipment and the ever increasing cost of the snail-control agent sodium pentachlorophenate, present financial and material resources are inadequate and cannot possibly meet all the demands of this difficult disease-control task.

6. Much has been neglected in the organization, political indoctrination and specialized training of disease-control administration and personnel in recent years. Responsible authorities should attach much importance and take determined and daring measures to put the serious epidemic under control and solve other related prevailing problems. We propose:

Public health services should intensify their drive in disease control resolutely. Local governments at all levels in the infected area should pay special attention to the epidemic and spare no efforts to stop its spread so as to save the suffering of the people. A large-scale investigation of snail distribution shall be conducted to provide data and background information for a new disease-control plan in the region. Guidelines for the prevention and control of infectious diseases should be mapped out and effective countermeasures introduced. It is imperative that in the next several years seasonal snail-control teams, each staffed and equipped according to the demands of its specific task, are organized to carry out snail-control and other disease-prevention measures in high-risk areas. A general surveillance and treatment program should be implemented as well. The purpose is to eliminate the sources of the epidemic through an expanded treatment program. In view of the severity of the schistosomiasis outbreak, we would like to call upon provincial and local authorities to extend necessary care

and financial support to protect the health of the production force as well as that of the masses in the infected area.

Epidemic Hemorrhagic Fever Outbreak in Liaoning

*90WE0153C Shenyang LIAONING RIBAO in Chinese
13 Jan 90 p 4*

[Morbidity Report by Dao Tai [6670 3141]: "Epidemic Hemorrhagic Fever Outbreak Recurred"]

[Text] Recently, because more and more patients suffering from epidemic hemorrhagic fever have been hospitalized, the Infectious Disease Hospital issued a warning that the peak season of epidemic hemorrhagic fever is fast approaching. In Liaoning, the disease is most prevalent every spring and fall.

Epidemic hemorrhagic fever is an acute viral infection transmitted by mice. The causative virus is carried in rodent blood, saliva, urine and feces. This disease can be contracted by environment or objects contaminated by mouse excreta. Nearly all the patients have had some past contact with mice; for example, some patients were infected by mouse excreta through skin wounds while others had consumed food, most frequently yams, fruits, cakes and cookies, contaminated by mice. In addition, massive epidemics of this disease have repeatedly occurred in places like collective dormitories, grain storages and shades on construction sites, where mouse densities are high and contaminations serious.

The chief symptoms are high fever, body temperature that may be elevated to 39°C to 40°C and hemorrhagic skin signs, such as reddened faces, congestion of the oculus conjunctivae, ecchymose rash on the neck and upper chest, headache, periorbital pain and lumbago; in some cases, patients cough up a lot of blood, or vomit or urinate blood. As a result, hemorrhagic shock usually follows. Because of their impaired renal functions caused by this disease, patients may also develop complications such as uremia, pulmonary and cardiac failure and die.

Epidemic hemorrhagic fever is mainly transmitted through mice. Its prevention is based on efficient mouse control. The disease can no longer be propagated if the mouse population density is reduced to less than 1 percent. Individuals should take the following precautions: avoid contact with mice and their excreta; teach children not to play with them and burn or deeply bury their dead bodies. Sales of infected food should be strictly banned and cooking utensils thoroughly cleansed if contaminated. To keep mice away from human dwellings, tents or shades on construction sites in the field built in the shape of an arrowhead sign should be replaced with those erected with side walls, in the shape of an arrow sign with a double shaft. Dwellings should not be close to kitchens or any food storages. Sleeping

berths should have high ground clearance and no food can be kept underneath. Bedding straw should be disinfected before use. Other preventive measures include digging anti-mouse ditches all around tents and removing mice and filling up mouse holes on the premises.

Lyme Disease Found in Anhui

90WE0153D Beijing ZHONGGUO YIXUE LUNTAN BAO [CHINESE MEDICAL TRIBUNE] in Chinese 15 Feb 90 p 2

[Article by Zhang Kuiyi [1728 2247 0001]: "Lyme Disease Found in Anhui"]

[Text] Drs. Zhang Fangzhen [1728 2455 2182] and Liang Wannian [2733 5502 1628] of the Communicable Diseases Teaching and Research Laboratory, Anhui Medical University, have discovered cases of Lyme disease in a county in the Dabie [1129 0446] Mountains of Anhui.

The researchers, using the supergroup sampling method, assayed 310 serum specimens for I_gG antibodies against Lyme disease. The results showed that there were 40 positive samples (I_gG antibody titer greater than or equal to 1:128), accounting for 12.9 percent of the total, and 29 possible positive samples (I_gG antibody titer 1:64), accounting for 9.4 percent. The disease has been detected in different age and occupation groups and no discernible incidence pattern has been observed. Lyme disease was found in 17 of the 48 villages studied, or 35.4 percent of the total. The researchers believe that the prevalence of this disease may be widespread and most people are susceptible. Because Lyme disease can cause severe and prolonged illness (severe damage to organs) and is easily communicable, the general public should be aware of the danger of contracting this disease.

First Large-Area Survey on Hereditary and Epidemic Diseases

90WE0153E Beijing BEIJING KEJI BAO [BEIJING SCIENCE AND TECHNOLOGY NEWS] in Chinese 21 Feb 90 p 2

["First Large-Area Survey on Hereditary and Epidemic Diseases in the Nation Conducted in Sichuan"]

[Text] (XINHUA) A 5-year, province-wide survey on hereditary and epidemic diseases has just been successfully completed in Sichuan. This study, a systematic evaluation of the characteristics of hereditary diseases in the mass of people in a large area, is the first ever conducted in the nation. Its findings are of great scientific significance and most valuable to society as a whole.

The survey was conducted among 126,000 human specimens out of 1,116.8 million representative of the groups of people in the province. Through this investigation, it was possible to ascertain the types of inherited disorders in general populations in Sichuan, to establish their orders of occurrence and to determine their incidences and distribution. Enough data had been obtained to calculate gene frequencies and carrier frequencies of 44 single-gene defects and the inheritance rates of some ten genetic diseases. Pathological and genetic analyses of some common disorders and serious defects, such as Down's syndrome, congenital deafness and blindness, were conducted as well. In addition, a thorough study of marriage between close relatives in Sichuan and its effects on heredity was also included in the survey.

Experts agreed that this survey provides not only a great deal of much-needed reliable data for advanced research in medical genetics, epidemiography, disease-control medicine and convalescence medicine, but also pertinent background information and data for the establishment of our national policies, as well as their implementation for hereditary disease prevention and to bring about the physical and intellectual improvement of new generations through better health care and education.

MALAYSIA

Cholera, Typhoid Under Control

54004309A Kuala Lumpur NEW STRAITS TIMES
in English 11 May 90 p 4

[Text] Johor Baru—The cholera and typhoid situation is under control and there is no cause for alarm, acting Health Minister Datuk Dr Sulaiman Haji Daud said today.

He said the public should not be unduly worried by the increase in the number of people warded for treatment as this does not mean the diseases were spreading.

He said because of greater public awareness, a larger than expected number of people had been admitted to hospitals in the endemic areas.

“This has given a false impression that there is currently a cholera and typhoid epidemic in the country.

“There is also a misconception that typhoid and cholera have spread to other areas. This is not true. The present outbreaks are restricted to only specific localised areas,” he told reporters here.

Datuk Dr. Sulaiman, who visited typhoid patients at the Sultanah Aminah General Hospital after a briefing on the typhoid situation in Johor, said it was safe for tourists to continue visiting the country as the outbreak was confined to specific areas.

To date 286 typhoid cases have been confirmed in Johor, with four deaths. Most of the cases were from the Plentong area here. In Kedah the typhoid outbreak was around the Kuala Nerang town.

Datuk Dr Sulaiman noted that even cholera was mainly confined to three districts in Kelantan.

“The recent long drought coupled with the large increase of food sellers during the fasting month and mobility of people during Hari Raya had aggravated the problem and caused the disease to spread in the localised areas.”

Case finding

He added that the Ministry, together with State and local authorities had taken precautionary measures.

This included active case finding for early diagnosis and treatment, public education to ensure safe food and water supply and prompt investigations to identify source of infection and mode of transmission.

So far 14 active case finding teams had been formed here to go on a “search and find” mission so that anyone having fever continuously for three-days could be hospitalised for diagnosis and treatment.

“Because of these proactive measures a larger than expected number of people had been warded for diagnosis and treatment. It does not mean typhoid is spreading,” he stated.

Datuk Dr Sulaiman said the Health Department would continue to step up its health education programme.

Health teams have already visited 9,280 homes, distributed 42,982 anti-typhoid brochures, put up 3,378 posters, conducted 15,733 ceramahs and 1,667 public addresses in the endemic areas.

He said the Ministry was grateful to health personnel, Government departments and voluntary bodies for their contributions in the fight against typhoid and cholera.

Meanwhile, the Public Bank Berhad Orchid Plaza branch here today donated \$1,000 to the Red Crescent Society for the anti-typhoid campaign.

Bank manager Paul Chew presented a cheque to the society’s committee member Freedy Loong at a ceremony here today.

Kelantan Cholera Situation Improves

54004309B Kuala Lumpur NEW STRAITS TIMES
in English 11 May 90 p 4

[Text] Kota Baru—The cholera situation in Kelantan is improving with another two districts being declared free from the disease.

State Medical and Health Director Dr Haji Wan Mahmud Othman said the two districts—Tanah Merah and Machang—were now free from cholera following no cases of the disease being detected since the past three weeks.

Since the outbreak of the disease in January this year, six cases of cholera and a carrier of the disease were detected in Machang, while in Tanah Merah, one case and three carriers.

This brings to four the number of districts which have been declared cholera free. The two other districts—Gua Musang and Kuala Krai—were declared cholera free last week.

Despite the improving situation, Dr Haji Wan Mahmud advised the public against using water from the Kelantan River as it still contained cholera germs.

Editorial on Typhoid, Cholera Outbreaks

54004309C Kuala Lumpur NEW STRAITS TIMES
in English 12 May 90 p 8

[Text] Outbreaks of cholera and typhoid have been detected in several States. A few hundred cases have been confirmed and warded in hospitals for treatment. There have been a few deaths. However, acting Health

Minister Datuk Dr Sulaiman Haji Daud asserts that the situation is under control, that there is no cause for alarm.

The Minister's assertion may have been made with an eye on tourist arrivals in Malaysia, but he is right in placing the situation within an accurate context. Cholera and typhoid are, unfortunately, perennial problems that will not go away, but it must also be said that the diseases do not usually exact a heavy toll.

The current outbreaks, while making an appearance in several States, have been confined to specific localised areas, thanks largely to the swift response and efforts of the authorities. In fact, several previously affected districts have now been declared free of cholera.

The circumstances contributing to the current outbreaks can be said to be exceptional. The proliferation of food stalls during the fasting month and the mobility of people during the holiday period of Hari Raya increased the chances of the diseases spreading. The recent extended drought also didn't help because it made people less fussy about drawing from sources of water that might have been contaminated.

Having noted all that, concern must still be expressed about the occasional threats posed by these diseases, particularly when nothing more than elementary hygiene and basic precautions are required to prevent a surfacing of the diseases. Granted that while the Government is spending a lot of money to make treated and potable water available to Malaysians, this basic amenity is still unavailable to many families and communities which are forced to be dependent on water from rivers, streams, wells and ponds.

But they should not be cavalier about the quality of the water drawn from such sources, particularly water that is to be used for drinking or the preparation of food. Is it too much of an effort to boil water that is meant for consumption? Is it asking too much to have hands cleaned before getting down to the task of cooking and baking? To have food covered from flies?

It is the responsibility of the authorities to contain outbreaks of diseases, and they have done well in reacting swiftly to the current situation. Cases have been promptly investigated to determine the source of the infection and the mode of transmission. People in contact with victims have been tested to determine whether they have become carriers of the disease. Food handlers have also been examined and received immunisation jabs. Affected areas have been cleaned up. Houses have been disinfected. People have been educated about causes, symptoms and necessary precautions.

But all these are measures taken after the event. The old adage about prevention being better than a cure is unquestionable wisdom. It is not as if the Government has been found wanting in its efforts in health education. Children are taught basic hygiene in schools. There is a widespread wealth of films, posters, pamphlets, booklets

and exhibitions on various aspects of health and diseases. There are periodic health campaigns and talks focussing on particular diseases.

Such information must not be ignored or dismissed. Nor should people get careless in their habits and ways. Just because people have had no previous problems with their regular source of water does not mean they can get sloppy in their personal habits. Just because a food stall has had no previous complaints about the cleanliness of its fare does not mean it is exempt from maintaining its clean routine.

The importance of healthy habits should not just be based on a concern for the image of the country and the effect it may have on possible foreign visitors. Surely it is vital enough that Malaysians be freed from the debilitating effects of diseases, particularly those that can be easily prevented.

Hawkers Found To Be Typhoid Carriers

54004309D Penang *THE STAR in English* 16 May 90
p 6

[Text] Johor Baru, Tues.—The health authorities here have identified two hawkers as typhoid carriers following tests on 1,366 hawkers and food handlers in areas affected by the disease.

Johor Tourism and Social Development Committee chairman Datuk Jimmy Low said today that the man and the woman were admitted to the Sultanah Aminah General Hospital here.

He said the screening was carried out in Masai, Pasir Gudang, Pelentong and Felda Cahaya Baru.

“We have screened almost 95 percent of all hawkers and food handlers in the affected areas and expect to test the remaining five percent soon.

“The anti-typhoid campaigns carried out by the authorities here have proven to be highly successful and the spread of the disease in Johor has been contained,” he added.

Datuk Low said that of the 488 people undergoing screening for typhoid here and in Tampoi, 267 were confirmed to be having the disease.

He said the screening had been sped up with the extra nurses and doctors seconded to the general hospital by the Health Ministry.

THAILAND

Health Ministry Reports Rise in Hemorrhagic Fever

BK0107044390 Bangkok *BANGKOK POST in English*
1 Jul 90 p 3

[Text] Almost 340,000 people are known to have suffered from hemorrhagic fever so far this year, twice as

many as in 1987, according to Deputy Public Health Minister Suthat Ngoenmun.

Mr Suthat said yesterday the ministry has coordinated activities with government agencies to prevent the disease spreading.

This involves educating people and sending teams to spray mosquitoes in vulnerable areas.

Mr Suthat, who travelled to Nakhon Si Thammarat where the disease is prevalent, said 3,000 people in the province have been admitted to hospital with the disease, the second-highest known incidence in any province.

Malaria Morbidity, Suppression Along Cambodia Border

90WE0218D Bangkok MATICHON in Thai 31 May 90 pp 1, 24

[Excerpt] [passage omitted] Dr. Thira Rammasut, the director-general of the Communicable Diseases Control Department, Ministry of Public Health, said that the reason for the outbreak of malaria along the Thai-Cambodian border is that that area is a mountainous jungle area. The military allows people along the border to come and go through the mountain passes. It all depends on which mountain passes they are allowed to use. That jungle area, particularly during the rainy season, has many places where water stagnates, which provide good breeding grounds for mosquitoes. Moreover, that area is within the zone of the Khmer coalition forces, and there are militarily strategic points in that area. Thus, no one is interested in eradicating mosquitoes or malaria there.

Dr. Thira said that a conference was held in order to establish malaria clinics along the borders with the cooperation of doctors, soldiers, and provincial officials. The purpose is to stop the spread of malaria, particularly along the Thai-Burmese and Thai-Cambodian borders. It has been possible only to stop malaria from spreading to the controlled zones. But it isn't possible to eradicate malaria, because the sources of this disease are located in neighboring countries. Besides this, there are also problems with respect to the mountain passes used by people who sneak back and forth across the borders and who do not pass through the malaria clinics that officials have established. As a result, these people spread the disease to villagers.

Dr. Thira said that with respect to the villagers who are hired to mine gemstones or transport goods across the border into Cambodia, officials at the malaria clinics will give them repellents or medicine to reduce the severity of malaria before their go. But they will not give them strong medicines because malaria can easily build up a resistance to medicines. If they give them these medicines, the malaria strains could easily build up a resistance to the medicines. The department is stressing providing people with information on how to prevent

contracting the disease, with the emphasis being on preventing being bitten by mosquitoes and using mosquito repellents. If a person comes down with a high fever and chills, he should immediately see a doctor in order to receive treatment, because the malaria strain present along the Cambodian border is a very virulent strain. It can affect the brain quickly unless the person receives treatment promptly.

"At present, we are treating malaria using a combination of three drugs. These drugs are very effective. But malaria usually becomes resistant to the drugs used within 3 years. Thus, we constantly have to look for new drugs to treat this disease. The malaria program is the department's most heavily funded program, receiving approximately 500 million baht to purchase medicines and insecticides to kill mosquitoes," said Dr. Thira. He added that the statistics show that in the period January-March 1990, a total of 57,257 people contracted malaria nationwide. In March alone, 19,186 people came down with malaria. In Trat Province, from the beginning of the year through March, 19,620 people contracted malaria. This is the province with the greatest incidence of malaria in the country, with the worst district being Bo Rai. In March alone, 7,173 people contracted malaria, which is one-third of the number for the entire country.

Mr. Songkhram Nampathom, the head of Chanthaburi Provincial Malaria Unit 57, said that in fiscal year 1989, the unit treated 17,320 people suffering from malaria. Of these, 529 had contracted the disease in Cambodia. In fiscal 1990, 8,874 people have come for treatment. Of these, 3,013 contracted the disease in Cambodia. He said that 1,590 patients came from Tok Phrom Subdistrict in Khalung District, Chanthaburi Province, and that 1,020 of these contracted the disease in Cambodia.

Mr. Songkhram said that on the average, about 50 people a day come for treatment. If the case is serious, the malaria unit sends the patient to the Phra Pok Klao Hospital.

Dr. Sanong Kosakhan, the director of the Phra Pok Klao Hospital in Chanthaburi Province, said that in 1989, 1,500 people came to the hospital for treatment of malaria. Eighty of these patients died. In 1990, 700 people have come for treatment, and 42 have died.

Dengue, Malaria Epidemics, Severity

90WE0218F Bangkok MATICHON in Thai 1 Jun 90 pp 1, 24

[Excerpts] [passage omitted] Dr. Thira Rammasut, the director-general of the Communicable Diseases Control Department, said that the number of people contracting dengue, which, like malaria, is spread by mosquitoes, will probably increase this year. There have been reports that 8,503 people have contracted this disease and that 24 have died. In January there were 2,014 cases, in February there were 2060 cases, in March there were 2,805 cases, and in April there were 1,598 cases. In May, only 20 cases have been reported, but there will probably

be further reports. It is thought that the situation this year will be like that in 1987, when there was a severe epidemic, and this year's epidemic could be even worse. In 1987, about 17,000 people contracted dengue nationwide.

Dr. Thira said that the central region has the largest number of cases, 3,715. This is followed by the north with 2,410 cases, the south with 1,263 cases, and the northeast with 1,116 cases. The 10 provinces with the largest number of cases are Sukhothai, Nakhon Sithamarat, Phitsanulok, Uthaithani, Uttaradit, Nakhon Sawan, Roi Et, Suphanburi, Lopburi, and Ratburi. This year, the Communicable Diseases Control Department has ordered the provinces to take steps to eradicate the mosquito breeding grounds in populated areas in order to reduce the mosquito population and reduce the spread of this disease during the rainy season. In places with outbreaks of dengue, this should be reported to the Provincial Public Health Office so that officials can be sent to spray the area.

Dr. Thira said that the number of malaria cases in provinces bordering Cambodia is increasing. Trat Province has the largest number of malaria cases in the country. Since the beginning of the year, a total of 32,851

cases have been reported there, which is 27 percent of the total number of cases reported nationwide. In 1989, the percentage was only 12 percent. The reason for the large number of cases is that the villagers there are hired to mine gemstones in Cambodia, where they contract malaria. The disease then spreads to others in the village. This strain of malaria is very virulent and is resistant to drugs. The Communicable Diseases Control Department is trying to deal with the situation by setting up malaria clinics at the Thai-Cambodian transit points. [passage omitted]

Dr. Songwuti Hutamai, an expert in preventive medicine with the Mae Hong Son provincial Public Health Office, discussed the malaria situation in Mae Hong Son Province. He said that in 1989, a total of 1,738 people contracted Malaria. In 1990, to date a total of 635 people have contracted this disease.

Dr. Songwuti said that the districts in Mae Hong Son Province with the largest number of malaria patients are Muang District and Pang Ma Pha Branch District. The reason for this is that people frequently migrate back and forth across the border and people cross into Burma to cut timber. Most of those who go there to cut timber are from other provinces.

YUGOSLAVIA

Government Denies Food Poisoning Epidemic in Kosovo

*LD2806221690 Belgrade TANJUG in English
1935 GMT 28 Jun 90*

[Text] Belgrade, June 28 (TANJUG)—The mass discomforts manifested by ethnic Albanian pupils in Yugoslavia's southern Province of Kosovo this spring, was not an epidemic of a contagious disease or food poisoning, it was concluded by the Federal Chamber of the Yugoslav parliament today.

The Federal Chamber, one of two chambers in the Yugoslav parliament, adopted an assessment of an expert commission of the Work and Health Secretariat, together with a report on the mass appearance of health problems in the province where a strong separatist movement of the majority ethnic Albanian population is active.

The mass number cases can be explained as a psychologically generated reaction, the commission concluded, which comprised the most eminent experts in this field from Belgrade, Zagreb and Ljubljana, known outside Yugoslavia's borders.

BRAZIL

23 Cases of Hemorrhagic Dengue in Niteroi; Three Dead

PY2306034090 Sao Paulo O ESTADO DE SAO PAULO in Portuguese 22 Jun 90 p 12

[Excerpt] Rio de Janiero—During the past few days three persons have died in Niteroi after becoming ill with hemorrhagic dengue. This information was provided by doctors from the Antonio Pedro Hospital, who reported that there are another 23 cases in the city. Last year 60 percent of Niteroi's population caught dengue, and now there is the risk of infection by the most serious form of the illness, which is also transmitted by the aedes egypti mosquito. [passage omitted]

Deforestation Linked to Increase in Leishmaniasis

PY2506154290 Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT 25 Jun 90

[Text] Uncontrolled deforestation is causing an increase in the skin disease called leishmaniasis, which is transmitted by phlebotomus insects commonly known by the name of asa de palha [straw wings].

According to the Leishmaniasis Research Laboratory of Minas Gerais, 49 cases of leishmaniasis were reported between October 1988 and October 1989; 50 percent of the patients live in residences located on the outskirts of Belo Horizonte. Dr. Valeria Maria de Oliveira, a research team member, believes the insects that transmit leishmaniasis are currently in the process of adjusting to city life after having been expelled from the jungle by indiscriminate deforestation.

MEXICO

393 Measles Cases, 6 Deaths in Ciudad Juarez Since January

PA1706023790 Mexico City Red Nacional 13 Imevision Television in Spanish 1230 GMT 9 Jun 90

[Text] Chihuahua medical authorities have warned that the measles epidemic is spreading to Mexican states bordering the United States.

Nuavujan Arroyo, assistant director of the Health Department in Ciudad Juarez, noted that there have been 393 cases and six deaths from January to date. Meanwhile, Ciudad Juarez health officials said that 16,000 children, whose ages range between one and four years old, will be vaccinated in a campaign that will begin on 11 June and is aimed at immunizing the largest number of children possible.

Meanwhile, in El Paso, Texas, authorities reported that the epidemic is under control and that while 200 cases were registered there were no deaths.

A total of 90 cases were reported in New Mexico, with the highest level registered in the southern part of the state near the border with our country.

NICARAGUA

Health Official Reports Measles Kills 151 Children

PA1406233590 Managua Radio Sandino in Spanish 1200 GMT 14 Jun 90

[Text] Dr. Reinaldo Aguilar, MINSA [Health Ministry] immunization director, has reported that 3,506 cases of measles have been registered in the country as of 9 June. Out of that total, 151 children, mostly under 4-years-old, have died.

Aguilar said that areas in regions two, three, and four, such as the Municipalities of Masaya, Granada, Chinandega, Corinto, Somotillo, El Viejo, and Managua's urban area, have been hardest hit.

He urged parents to have their children vaccinated during a campaign that will take place on 16-17 June.

PERU

Cuban Aid for Dengue Infested Area Arrives

PY1506215890 Lima Television Peruana in Spanish 1800 GMT 15 Jun 90

[Text] A small delegation of Cuban doctors, specialized in the dreadful dengue disease, arrived early this morning in our country. The delegation immediately went to the zone where the dreadful virus is rampant. [Begin recording] **Cuban doctor:** The donation involves 10.3 tons of medicine. A total of 452 packages are coming. These packages contain antibiotics, serum, and bandages.

Four specialists are also coming—a clinician for adults, a clinician for children, a pediatrician, an epidemiologist, and us. This team already has experience in combating dengue. We have worked in Nicaragua, Ecuador, Venezuela, Colombia, and recently in Honduras where we were also giving our advisory services.

Reporter: What is involved in this treatment of dengue?

Cuban doctor: Eh? Well, the treatment of dengue [changes thought] ... This is a viral disease. Later, my specialist comrades will explain the treatment to you. However, the main point in combating the dengue is to combat the carrier, the mosquito. Concerning this point, the entire population must participate.

Reporter: Fumigation, perhaps?

Cuban doctor: Well, fumigation and especially preventing the breeding places. This is what is more important.

Cuban Ambassador Francisco Ramos Alvarez: I am the Cuban ambassador here in Peru. I live here. I have come to meet my medical comrades, who will provide technical assistance to control dengue, and to receive the aid that the Cuban Government has granted to the Peruvian people in keeping with the events in the north that are well-known to everyone.

Reporter: What type of aid have you brought?

Ambassador: Basically medicines. The doctor has already explained this to you—antibiotics, bandages,

serum as well as medicines. And, on the other hand, technical assistance to control dengue.

Reporter: Will this aid for the Peruvian people continue?

Ambassador: Well, this was a petition made as a result of the earthquake and this is the first stage. We do not know if it will be continuous. It also depends on the situation they find in the region where the epidemic is located. Therefore, we do not know what will happen, that is, greater assistance could be provided or this could be enough. [end recording]

ALGERIA

Plan To Combat High Infant Mortality Rate Urged

90WE0188A Algiers ALGERIE-ACTUALITE in French
4 Apr 90 p 10

[Article by Fadela Chaib: "Infant Mortality" To Be Born and Not To Be"; first paragraph is ALGERIE-ACTUALITE introduction]

[Text] Too many infants following birth are still dying at an abnormal rate in view of the possibilities. In two years we have succeeded in pushing back the threat. But organization, etc. is still lacking.

The national campaign against diarrhea-caused illnesses, which began in June 1989 and went on until October, has just produced its first results. The target population consisted of hospitalized infants from one day to two years old. The goal of the promoters of the campaign is to cut the mortality rate in half.

During this campaign 34 percent of the cases of hospitalized infants were attributable to diarrhea and its complications. Clearly positive in comparison with the 1987 national campaign, the results indicate that six percent of the infants died as against 12 percent in 1987.

Diarrhea has always been one of the chief causes of infant mortality. Actually, it is the cause of 30 percent of the deaths, producing 30,000 victims a year. Aware of the problem, the Ministry of Health has focused its activities on the fight against dehydration. The Soidal Enterprise produces 5 million packets of oral rehydration salts (SRO), one of the most effective treatments recommended by WHO. Some 8,000 persons in the country work as staff personnel in the 2,000 primary care centers established throughout the country.

Paradoxically, this deployment does not seem to be very operational. In fact, on-the-spot studies conducted by doctors have shown that two-thirds of the infants died outside of hospitals, especially nursing infants. Out-of-hospital deaths were not included in the 1989 campaign.

"After premature birth, diarrhea is the second most frequent cause of infant mortality. The problem lies in medical and paramedical personnel's lack of organization and motivation. The structures exist, and the people, too. We would have to train people particularly interested in this program and evaluate their work," Professor Grangaud, the head of the Department of Pediatrics at Ain Taya Hospital, explained. SRO is available, but the ignorance of some mothers in the underprivileged classes cancels out the benefits of this treatment. In fact, they add sugar to improve the flavor when their infants refuse to take these salts. "I think that television has played its role in explaining some things. How should SRO, etc. be used? There are some details that distort everything. For example, some mothers stop

nursing and stop giving them any food because they think that SRO replaces everything. This is why the critical threshold, namely severe dehydration, is often the fate of the infants and death is likely," he added.

The unavailability of drinking water, storing it in jerrycans, and used and stagnant water greatly favor these illnesses. This is the whole problem in the case of underdeveloped societies with shortages of water and the dirty environment. Premature birth is the chief cause of infant mortality. Regional studies show that 35 to 40 percent of nursing infants die within one to 28 days of their birth. According to Prof. Grangaud, an average of 50,000 premature births a year are recorded in Algeria. In this case it is not medical factors that are of primary importance, but social and hygienic factors. "Premature birth is the result of poor pregnancy and childbirth conditions. Following the progress of the pregnant woman, improvement of her condition through long maternity leaves, proper hygiene in her immediate environment, and a healthy diet can lower the rate of premature births to a minimal level. Premature infants are the result of early marriages, the woman's physical fatigue, especially if she has had other children, and poor childbirth conditions," Prof. Belkhenchir, the head of the Birtraria Department of Pediatrics, told us.

While waiting for the social conditions of women, especially pregnant women, to improve, from six to 10 percent of all childbirths are premature. The hospitals do not have the capacity to incubate all the premature infants. At Ain Taya, for example, there are only six incubators. Only two of them are in proper working order. There are about 1,200 incubators for the 200 health sectors. "Even though there is a shortage of incubators, qualified personnel can save a premature infant by keeping its temperature from dropping," Prof. Grangaud explained. Deaths are recorded daily due to lack of qualification and motivation. "Two years ago my wife, who had had a very difficult pregnancy, gave birth to a premature boy. The two incubators operating at the Algiers Central Clinic were already in use. The doctor and the midwife asked me to make the rounds of the hospitals and clinics to find one. It's unusual for them not to even lift a finger to help parents. My baby died in an aura of indifference," Mohammed told us with bitterness.

"As long as pregnancy conditions are not improved through at least three to four medical checkups during the woman's pregnancy and delivery in clean surroundings, we can fill 5 July Stadium with incubators, but the premature infant problem will not be solved in Algeria," Dr. Belkhenchir emphatically stated.

The situation is not shining in our hospitals and clinics. In these places the dangers of infection are as numerous as they are elsewhere. The elementary rules of asepsis are not observed. Cats freely roam through them, there is no running water, and chlorine is rationed. A doctor told us

about a cleaning woman in his department who had warmed up her sandwich alongside a premature infant in an incubator.

Next year Dr. Graba's team, Drs. Bensaid, Belhocine, and others, plan to launch a campaign against neonatal mortality (during the first 28 days following birth), specifically premature birth and respiratory infections. This year will, in addition to other health activities, be devoted to further improving the results of the diarrhea campaign since the latter ailment is no longer the major cause of infant mortality in Algeria.

Despite efforts, the coverage rate for vaccines is relatively low. Only 58 percent has been recorded for sparsely populated areas as against 79 percent in built-up areas. An action plan aimed at raising the rate in sparsely populated areas has been set in motion for this year in some 20 wilayas.

The infant mortality rate in Algeria is on the order of 60.3 percent. It has dropped 20 points since 1984, but the results are not homogeneous for all the regions. In some of them it comes to 80 percent and in others 50 percent. In Tunisia the rate was 50 percent in 1988, 73 percent in Morocco, 144 percent in Mauritania, and 84 percent in Libya. The average for the UMA [Arab Maghreb Union] countries was 69.62 percent.

Algeria is ahead of several underdeveloped countries in this area. But there are still many efforts to be made. Elsewhere the results are staggering: In France the rate is nine percent and in Switzerland eight percent. It would be presumptuous of us to expect to quickly achieve that figure, but even getting it down to 50 percent would constitute a record.

EGYPT

28 Million Suffer from Bilharziasis, Kidney Failure

90WE0210A Cairo AL-WAFD in Arabic 1 May 90 p 3

[Article by Mahmud Shakir]

[Text] Some 28 million citizens in Egypt suffer from kidney failure and bilharziasis because of pollution of the Nile, and some 8,000 patients join the list of patients annually. This is an alarming figure, especially if we realize that medical resources cannot handle this large number of patients. There are no more than 99 dialysis machines available in government hospitals, each treating six patients weekly and costing 20,000 pounds. The kidney center has cost 100,000 pounds at least, of which 40,000 pounds were for a filtering unit for the water; its operation costs 80,000 pounds annually. Additionally, the government spends 16 billion pounds annually on sewage treatment and bilharziasis eradication.

Dr. Hamdi al-Sayyid, former dean of physicians, said at a seminar on the role of the doctor in environmental

protection, that the Ministry of Administrative Development has not succeeded in the field of development as much as it did in achieving progress on the environment. There is no hope of improving the environment, he stressed, except through awareness and environmental education, to be undertaken by the various state bureaus and the political parties. He said that pollution of the Nile river has caused 28 million citizens to suffer from bilharziasis and kidney failure. Chlorine used to purify water is insufficient to eliminate all pollutants, he said.

Speaking at the same seminar, al-Muhammadi 'Id, chairman of the Environment Department, characterized the problem of sewage draining as a time bomb, saying that it would cause a disaster if the government does not hasten to tackle it. He said that about 4,500 villages are without sewer drainage, with the waste directly pouring into the Nile. The government is spending 16 billion pounds annually on sewage treatment. He said the Environment Department has imported a foreign design for the manufacture of filters costing \$1.25 million, which it obtained from Poland as compensation for an accident involving its ship in Egyptian waters. The pollution level in Cairo's atmosphere is five times more than is allowed internationally, he added.

Thousands of kidney failure patients in Egypt suffer from illness, poverty, and government bureaucracy. A patient's need for dialysis treatment is continuous, totaling up to 12 times a month, each time costing 120 pounds. Therefore, a kidney failure patient automatically turns to the Ministry of Health asking for treatment at the government's expense. Who will realize this for him?

Medical research results confirm that at least 60 percent of the Egyptians suffer from bilharziasis: 28 percent of diagnosed cancer cases are bladder cancer caused by bilharziasis; 32 percent of women suffering from bilharziasis suffer from infertility; at least 17 percent of kidney diseases are caused by bilharziasis; 50 percent of the peasants and 77 percent of school children suffer from anemia; 10 percent of kidney failure patients suffer from bilharziasis; and 50 percent of deaths in the Egyptian rural areas are caused by esophagus varicose which is caused by bilharziasis. Research also confirms that suffering from the disease at an early age leads to an increase in death rate and a decrease in comprehension among more than 3 million school children. Bilharziasis also affects the insulin producing cells and leads to the destruction of the pancreas and the rise of blood sugar levels. The national economy loses about 2 billion pounds because of the bilharziasis; a bilharziasis patient lays about 90,000 ovum in the canal daily [as published]. Some 81 percent of the rural inhabitants are deprived of sewer drainage and 36 percent have no fresh water resources.

An AL-WAFD correspondent visited the Health Ministry's medical department and found a large number of patients from the various governorates who have come

to apply for treatment at the government's expense. We met some of them. Abu-al-Khayr Shabanah, a 55-year-old retiree, said:

I am unemployed and my pension is 45 pounds, which is not enough to pay for the treatment of my illness, which requires hundreds of pounds. Therefore, I thought of seeking treatment at the expense of the government which has consumed my youth. I came here unaware that the procedure is lengthy and seemingly endless.

We also met with a 30-year-old farmer from al-Daqahliyah. The signs of weakness and ill-health were apparent on his face. He came for treatment at the government's expense and for dialysis. He said: I have been ill with kidney disease since 1983. I entered a private hospital and spent 45,000 pounds. I underwent three operations. But I felt tired once again. The doctor treating me advised me to go to the Ministry of Health for dialysis treatment. This requires analysis, X-rays, and social investigation by the Ministry of Social Welfare in order to establish my material state and confirm that I own nothing before the government undertakes my treatment.

Dr. Ahmad Shafiq, a surgeon at Qasr al-'Ayni hospital, stressed that there is a difference between treatment of the disease and protection from it. The means of combatting bilharziasis in Egypt are still insufficient because treatment of bilharziasis is protection from it. A patient takes medicine and he recovers from it, but he will again be attacked by it. The conditions leading to the attack have not changed. We should concentrate not only on treatment but also on methods of protection from bilharziasis. The government is conducting a good information campaign, but the Egyptian citizen and the Egyptian *fallah* [peasant] lack awareness because of the high rate of illiteracy. This is despite the many warning notices. The *fallah* urinates in the water canal from which he drinks and in which he washes, despite the intensive public warnings of the dangers of the disease of kidney failure and liver fibrositis. The solution lies in several things: the first, is to reduce the rate of illiteracy and, second, there is need for change in people's behavior. This depends on providing alternative means of hygiene and not just on concentrating on publicizing the facts about the disease and its dangers. As for the problem of kidney failure, it is a social problem. Focusing on dealing only with its health aspect is a great mistake. This is because we are tackling the problem only from one angle, at the expense of many other aspects that are no less important. Treatment by injections has led to the accumulation of certain viruses in man's body, thus causing the spread of liver fibrositis, which is considered to be one of the most serious problems. About 90 percent of rural inhabitants suffer from bleeding of the esophagus varicose.

Dr. Usamah 'Abd-al-'Aziz, professor of internal medicine and cardiology, believes that bilharziasis is chronic and that it is increasing in Egypt more than it is in the African countries. Television advertisements give a false

sense of reassurance. Pills taken by a bilharziasis patient do not provide a 100 percent cure. Still, we see the Egyptian *fallah* taking a dip in the canal and children swimming in it. This is a bad behavior. Treatment lies in the behavior of the patient himself; he should avoid going to the toilet in the water.

The water should be cleansed of snails. Every individual in Egypt should be issued a health card. Health awareness should be taught in schools by always observing protection and cleanliness.

Research shows that treatment is not as easy as some would believe. If medicine eliminates the illness, it does not necessarily eliminate its many implications. The measures being taken at the national level are mere palliatives.

Dr. Mahmud Sami Aba Rayyah, a consultant general surgeon, said that bilharziasis is the biggest health problem in Egypt. So far we have not found the right treatment, nor have we been able to completely eradicate this disease that is the cause of the highest death rate in the Egyptian countryside. In fact, it hampers more than half of the productive manpower in the society.

Liver Disease Considered Leading Cause of Adult Deaths

90WE0211A Cairo AL-WAFD in Arabic 27 Apr 90 p 4

[Text] Liver diseases have now become the leading cause of death and disability among adults in the Egyptian population. The cause of their spread is due to several factors, among the most important of which is environmental pollution, which constitutes a great disaster in Third World countries. The liver is the organ upon which the affects of pollution are largely reflected, so it is attacked by many diseases. One of them is cancer of the liver, which is widespread in all countries of the world, inasmuch as it represents six percent of all cancer which attacks men, and three percent with respect to women. In general, the rate of liver cancer in Europe and America is considered low in comparison with southern Africa. Cancer of the liver is due to infection by the B virus, for which scientists have found a protective serum; however, it is found only in rich countries, and so far it has not been possible to make it generally available in Third World countries, including Egypt. Egypt is characterized by the highest rate of infection by bilharzia, which is the basic cause of infection by serious liver diseases, such as cancer, cirrhosis of the liver, and esophageal varices. Faced with these problems which confront the liver, Egypt turned to establishing the Liver Institute, which is now considered to be the the first center specializing in the treatment of liver diseases in the Arab region. We met with professors in various countries of the world to learn the facts about the future of liver treatment in Egypt and the Arab region.

We must have a good understanding of the size of the problem of liver diseases in the Arab region, now that they have become the leading cause of death in most of

the countries of the world among people of various ages, as was stated by Dr. Yasin 'Abd-al-Ghaffar, professor of liver surgery, founder of the Liver Institute in al-Minufiyah, and attending physician to the late artist 'Abd-al-Halim Hafiz. At the start of the interview with him, he explained that the spirit of research and study must be fostered in the rising generation of Arab and African doctors. But on the other hand there is a greater problem, namely that of environmental pollution. We are now surrounded by a band of environmental pollution which turns directly against the liver and affects it more than the rest of the organs, and afflicts it with many serious diseases. He then insisted that the protective serum against the B virus had to be provided, as the virus attacks the liver and leads to cancer and cirrhosis of the liver, which hastens death.

On the problem of the B virus hepatitis, and on ways of combatting it, Dr. Husayn 'Abd-al-Hamid, professor of diseases of the abdomen and digestive system and head of the section in the al-Azhar College of Medicine, stated that there are three important points that must be concentrated upon, namely subsidizing the introduction of plastic syringes so that they could be used in all areas of Egypt.

Dr. Safwat Farid Sayf, specialist in abdominal fevers and diseases, said that the most important diseases that threaten the liver are bilharzia and viral hepatitis, which sometimes lead to cirrhosis of the liver, which is the most serious liver disease in Egypt. As for cancer of the liver, its rate in Egypt is not as high as in the countries of southern Africa. The spread of cancer of the liver is strongly linked to the spread of the B virus hepatitis, and this virus is spread throughout Egypt, infecting about 10 percent of the Egyptian population. The situation is aggravated if the patient is infected with the B virus B [as published], which is also an infectious virus in Egypt, infecting about 30 to 60 percent of B virus patients. In the case of chronic hepatitis, it causes the condition to deteriorate and increases complications. In recent years scientists have discovered two new viruses, virus C and virus E. The first virus plays a role in increasing the rate of cirrhosis of the liver and cancer of the liver. All advanced countries have determined its rate among their populations, but we in Egypt are still waiting for research to know the extent of the spread of virus C in Egypt. As for the second virus, E, it does not cause chronic liver problems, but is a threat to pregnant women, for if the liver of a pregnant woman is infected, there is a mortality rate of 20 percent.

INDIA

'Noisy Scenes' In Bihar Legislature Over Cholera

BK0907160990 *Delhi Domestic Service in English*
1530 GMT 9 Jul 90

[Text] In Bihar, both the houses of legislature witnessed noisy scenes today over the outbreak of cholera in Patna and several other districts. As soon as the assembly met

for the day, the IPF [Indian People's Front] members rushed into the well of the house, demanding resignation of the chief minister, the health minister, and the urban development minister, alleging failure of the government in checking the epidemic.

In the upper house, the opposition Congress-I members supported by CPI [Communist Party of India] raised the issue by insisting on admission of an adjournment motion of the Congress-I member on the subject.

In both the houses, the chair ruled that the government would make a statement on the matter later on.

New Strategy To Combat Malaria Welcomed

54500097A *Calcutta THE STATESMAN in English*
11 May 90 p 6

[Editorial: "Fighting Malaria"]

[Text] It is good news that a new strategy of bio-environmental control of malaria has been successfully tested in 12 different locations and is to be introduced shortly on a State-wide scale, in Karnataka to start with, as part of the National Malaria Eradication Programme. This is a welcome development since the present strategy of insecticidal spraying is said to have proved far from effective with the disease-causing anopheles mosquito becoming resistant to insecticides. The programme has even begun to be objected to by the people who have become more and more environment-conscious. Meanwhile, as residents of even small towns will bear out, the mosquito menace has increased alarmingly and malaria, which a decade ago was thought to be close to being eradicated in this country, still remains a scourge. The new strategy involves environmental management through the elimination of stagnant water by improving drainage, preventing seepage and filling lowlying areas and includes social forestry measures.

This strategy, however, requires for its success the active participation of the community, unlike the existing one which is almost wholly a government programme. But it should yield quick results, with experts promising the complete elimination of mosquito-breeding within three years. Many will pray that the promise comes true. For one thing, the country may not be able to afford the increasingly large sums required for malaria control, the present annual expenditure being over Rs 200 crores, and malaria is only one of several diseases which have to be fought. For another, the vaccine to prevent malaria is not yet available and is still in the laboratory stage even abroad: according to the WHO, it will be at least a decade before the vaccine can be developed. Also, and this is the really worrying part, the material parasite is becoming increasingly resistant to what is now considered the standard drug, chloroquine. Over a third of the malaria cases in this country are feared to be caused by this drug-resistant parasite.

ISRAEL

Hoof and Mouth Disease in Northern Areas

54004511A Tel Aviv HA'ARETZ in Hebrew
11 Apr 90 p A4

[Article by Hayim Bi'or]

[Text] Farms in the north and the veterinary service are concerned following an outbreak of hoof and mouth disease. In the last two days, half of the lambs in one herd died on Moshav Merhavia in 'Emeq Yizre'el. Following the outbreak of the disease, a quarantine was imposed on the moshav, on nearby Kibbutz Merhavia and on Sulam, a neighboring Arab village. Today it will be decided whether the quarantine should be broadened to include other settlements in the area.

The external symptoms of hoof and mouth disease are sores in the mouth area and on the feet of sheep, goats, and cattle. The owner of the farm in question on Moshav Merhavia, who found 30 dead lambs the day before

yesterday and noticed a limp in other lambs, immediately called a veterinarian. This latter shipped several of the dead lambs to the veterinary institute and the staff of the institute determined that it was a question of hoof and mouth disease.

The head of the veterinary service for the Ministry of Agriculture, Dr. Arnon Shimshoni, said that the outbreak of the disease must be considered serious because the herd that was infected had been vaccinated only a month ago. According to Shimshoni, this is a disease that more readily strikes lambs, while adult herds are less affected.

People can contract the virus, although it does not cause them bodily harm.

Recently there was an outbreak of the disease in December 1989 on Moshav Amtzia in the Lachish region. Prior to that, the disease had appeared in March of 1988, on Kibbutz Galit. This morning, the veterinary service will begin revaccinating all herds of sheep and cattle in a 10-km radius of Moshav Merhavia.

Ivanovo Hepatitis Outbreak Blamed on Contaminated Melon

*PM2106082590 Moscow IZVESTIYA in Russian
19 Jun 90 Morning Edition p 2*

[Mikhail Ovcharov report under "Direct Line" rubric: "Suspicion Has Fallen On... Melon"]

[Text] Ivanovo—In Ivanovo Oblast cities 218 people have been hospitalized. The diagnosis is "infectious hepatitis." One child in ten is sick. The infection is of medium severity.

It is assumed that the outbreak of jaundice has been caused as a result of the consumption of a Central Asian delicacy—dried melon from Turkmenia, which has been delivered to the Upper Volga region by the "Merkuriy" cooperative. A great deal in this episode remains to be clarified: Where and how did the dangerous virus get into the melon, and who is to blame. Only one thing is certain: Five tonnes of this tasty food product has been imported into the oblast, and all of it, it seems, has been eaten, so there is nothing to test.

To be on the safe side, hyperchlorination of drinking water has been introduced in Ivanovo to prevent its possible contamination by the virus.

325 Poisoned by Ice Cream in Kuybyshev Oblast

*LD2706052590 Moscow Domestic Service in Russian
0400 GMT 27 Jun 90*

[Text] Probably after the publication of today's PRAVDA—now I shall tell you about it—the deputies will consider it necessary to talk about not only the quantity of goods but also about their quality.

It would seem that nothing could be safer than ice cream. It is not poisonous, is it? But it looks as if surprises now await us around every corner. In the last few days in the neighboring towns of Tolyatti and Zhigulevsk, 325 people have been hospitalized. Of them, 224 are children. They had all eaten ice cream and drunk milk. Sukhobukov, the chairman of the oblast extraordinary anti-epidemic commission, explains the situation like this. The dairy industry of Kuybyshev Oblast has truly become an [unknown expression] of delayed action. Failure to observe the correct technology and broken equipment are leading to regrettable consequences. This time it was negligent carelessness on the part of the staff. The rules for heat treatment of the milk were not observed at the Tolyatti dairy factory No. 1. Part of the milk went to the ice cream factory. And as a result, there has been an outbreak of gastrointestinal disease and some children are in a serious condition. For the moment, deliveries of milk to Tolyatti and the northern zone of the oblast have been stopped. Throughout the weekend, veterinary staff have been investigating the situation. Double sterilization of products is being carried out to avoid risk.

All that has been said was reflected at the session of the extraordinary industrial antiepidemic commission at the end of last week.

But you have to agree that you and I do not feel any better because of such talks and sessions. You see, the emergency situation occurred at a new enterprise which is fitted with splendid imported equipment. But what can be said about the remaining equipment which has not been repaired for ages, where the level of discipline with respect to technology does not stand up to any kind of criticism at all. At the present time, after numerous transformations of ministries, Soviet equipment for the dairy industry is hardly being manufactured. And as you know, there is no foreign currency for imported equipment.

Thyroid 'Abnormalities' Admitted in Children Near Chernobyl

*OW0107233190 Tokyo NHK General Television
Network in Japanese 1000 GMT 25 Jun 90*

[Text] The first meeting between Japanese and Soviet scientists to discuss the effects of radiation opened in Tokyo today. The discussions at the meeting are expected to center on the nuclear accident at Chernobyl.

In his speech at the conference, Anatoliy Romanenko, director of the All-Union Scientific Center for Radiation Medicine, denied Soviet reports that cancer of the thyroid and leukemia have increased. However, he did admit that some children living near the Chernobyl plant and born after the accident suffer from thyroid abnormalities believed to be the result of radiation.

'Alarming Reports' of Plague Outbreak Denied

*LD0807055690 Moscow Domestic Service in Russian
0330 GMT 8 Jul 90*

[Text] The alarming reports circulated in the past few days by some of the media have been proved wrong. They claimed that a small boy had been taken to hospital in Guryev oblast with symptoms of bubonic plague. The news appeared quite plausible, since last year there was indeed an outbreak of plague there, although it was quickly isolated.

A team of the republic's [Kazakhstan] leading doctors was dispatched to Guryev oblast. They reported back that it was a false alarm. Although the boy is indeed ill, it is not that serious—he has inflammation of the lymphatic glands. This has been confirmed by the results of bacteriological analysis.

Fishing Suspended in White Sea Due to Poisoning

*LD0907163490 Moscow World Service in English
1500 GMT 9 Jul 90*

[Text] The executive of the local government of the Arkhangel region has suspended fishing in the White

Sea's off shore areas. The measure follows an enigmatic ecological disaster which has affected the region. The waves have carried ashore millions of dead star fish. Mass deaths of seals, molluscs, and even seagulls were

registered. All attempts by experts to find the cause of the disaster have been unsuccessful so far. Poisoning of the sea water is the most likely reason, however, it is still unclear what caused it.

CANADA

Four Deaths in Ontario Due to Creutzfeldt-Jakob Disease

54200029 Toronto *THE SATURDAY STAR* in English
26 May 90 p A6

[Article by Jennifer Gould]

[Text] Burlington health officials are investigating the deaths of four people who have died of a rare fatal illness in the Burlington-Hamilton area.

Health officials say it is unusual to find the disease in Canada, let alone four cases in one city.

The rare disease, called the Creutzfeldt-Jakob Disease, is so difficult to detect that it is sometimes only found after the patient is dead, said Ebbe Marquardsen, spokesman for the Joseph Brant Hospital in Burlington.

Marquardsen described the disease as "a sort of viral infection involving the nervous system that then sweeps through the brain tissue."

After the fourth death, the hospital contacted the National Institute of Health in Washington and asked local authorities to investigate the occurrences. The hospital is also considering assigning one of its summer interns to work exclusively on finding out more about the disease, Marquardsen said.

So far, nothing has been found to link the four victims, who are unrelated and are between 61 and 81 years old. The four never underwent surgery and were never in the hospital at the same time, Marquardsen said.

He stressed that the deaths were not the start of an epidemic, and that doctors and health officials are still investigating.

Drug Addicts Seek U.S. Treatment To Avoid Ontario Delays

54200026 Toronto *THE GLOBE AND MAIL*
in English 7 May 90 pp A1, A24

[Article by Eric Skelton: "Addicts Illegally in U.S. Get Bills Paid by Ontario"]

[Excerpts] The Ontario Health Insurance Plan [OHIP] is paying up to \$800 a person a day for treatment of Canadian drug addicts who are being smuggled illegally into private hospitals in the United States.

The addicts are drawn to U.S. hospitals to avoid waiting lists of four weeks for a medical assessment and up to a year for treatment at an OHIP-covered centre in Ontario.

Two Toronto addiction counsellors, who spoke on condition they not be identified, said at least three "patient-brokers"—companies that ship addicts for treatment programs in the United States—are operating in Toronto.

Pauline Anderson, a spokesman for OHIP, said the health insurance division of the Ministry of Health, which is responsible for payment of claims for insured services, had never heard of two of the patient-brokers.

Documents obtained by The Globe and Mail show that a Buffalo hospital billed OHIP \$23,967.52 for 56 days of treatment—for two visits, one in 1987 and one in 1989—for a cocaine addict from Ontario.

Hospitals in the states of New York, Colorado, Louisiana, Minnesota and Washington and a franchise operation based in Texas are among those accepting patients from Canada. The hospitals then bill OHIP for as much as \$30,000 for 28 days of treatment, sources say.

The ministry pays 75 percent of the amount it is billed for drug treatment in the United States.

Counsellors blame a lack of treatment facilities in Ontario, coupled with a reluctance among addicts to admit to U.S. border authorities why they are entering the United States, for the growth of "a huge underground illegal railroad."

One cocaine addict, a 24-year-old Montreal native, described how a Toronto patient-broker drove him and two other addicts in two cars to a border crossing into Buffalo, N.Y., on Feb. 6.

He said a representative of the Toronto broker told him to say they were going to Buffalo for a dinner of chicken wings and then going shopping. [Passage omitted]

He was turned away at the U.S. border by an immigration officer who questioned the group's story, but he said his broker smuggled him through on a second attempt by placing him in a car with two adults and a small girl so he could pose as a member of their family.

The following day, an admittance form from the CPC East Lake Hospital in New Orleans recorded his arrival for treatment for "substance abuse." Under "name and address of insurance company," the admitting clerk entered "OHIP Insurance."

The addict, who said he has used drugs since the age of 12, said the U.S. hospital paid for his airline ticket from Buffalo to New Orleans. He said he counted 25 Canadians among the 34 addicts in group therapy sessions with him.

When called yesterday for information on how to refer Canadian patients to Louisiana, a hospital official suggested calling the Toronto broker named by the former cocaine addict.

The former addict said his broker now smuggles addicts into the United States by flying them first from Toronto to Winnipeg, then to Minneapolis, and then to Memphis, Ten., before finally arriving in New Orleans.

"They had to change their route because Buffalo was getting really sticky," he said.

Addiction to drugs or alcohol is one of 33 separate grounds under which a non-citizen can be denied entry to the United States under the U.S. Immigration and Nationality Act, according to a spokesman for James Montgomery, director of the Detroit district of the U.S. Immigration and Naturalization Service. [Passage omitted]

Joy Reid, executive director of 416 Drop-in Centre in Toronto, said addicts are reluctant to admit to border authorities they are entering the United States for drug treatment, because they feel the information will be passed on to U.S. law-enforcement authorities. [Passage omitted]

Ms Reid blames the provincial government for not providing enough spaces in Ontario for drug addicts, who must join waiting lists of between four weeks and a year for admittance to an OHIP-covered program in Ontario. "By not providing any treatment centres in Canada, the government is forcing people to lie," she said.

Another counsellor said he would not hesitate to break U.S. immigration laws to help an addict get treatment in the United States. Addicts, he said, are desperate by the time they recognize their need for treatment and cannot wait four weeks for a doctor's assessment. [Passage omitted]

Addicts interviewed said they are reluctant to seek treatment at the Addiction Research Foundation in Toronto, derisively known as "BARF" among addicts because of the nausea-inducing tests used to establish an addict's dependency level.

Robert McCormick, who founded the Crossroads Treatment Centre Society in Kelowna, B.C., said he is disturbed by television advertising carried into British Columbia and Alberta for private clinics across the border in Spokane, Wash., and Minneapolis.

"Many of the American advertisements promise these high success rates, and it's not based on any real empirical evidence to my knowledge," he said. Addicts, he said, "are desperate. They'll do anything that comes along that makes promises."

The Toronto Mayor's Task Force on Drugs, formed two years ago, is to publish the final report of its subcommittee on treatment and rehabilitation on Wednesday.

Mite-Affected Honeybees Reach Ontario; Menthol Used

Fruit Tree Industry Threat

54200030 Toronto THE GLOBE AND MAIL
in English 14 May 90 p A11

[Article by Krishna Rau]

[Text] A blood-sucking mite is killing millions of honeybees across North America and threatening Ontario's multimillion-dollar fruit tree industry.

Honeybees in Ontario, which pollinate about \$65-million worth of crops in Ontario's Niagara Peninsula annually, according to a University of Guelph study, are under attack from the tracheal mite. The insect has already caused widespread damage in the United States, and has been present in Western Canada for years.

Douglas McRory, the Ontario Ministry of Agriculture's provincial apiarist, says the situation is desperate.

"From a beekeeping point of view, this is the biggest disaster period in North America."

Mr. McRory said the mite kills by choking the bee. "It crawls right in and punctures the breathing tubes, then lives on the blood. Then it multiplies and clogs the tubes. Once the major breathing trunks get plugged up, the bee is in real trouble."

So are the beekeepers and fruit-growers, said Paul Montoux, president of the Ontario Beekeepers Association. He said the beekeeping industry was in bad enough shape before the mites.

"We've got beekeepers that are in financial trouble without these mites, let alone with them."

Mr. Montoux said it is too early to tell what the effect will be on this year's fruit crop. But unless a solution is found quickly, the effect on future crops in North America could be devastating.

"It will just be a matter of time before the lack of pollination shows up in a lack of production and quality (of fruit)," he said.

Mr. Montoux said the mites could lead to problems with other crops as well. Crops such as barley or wheat are pollinated by bees brought in by fruit growers for their trees. If there is a lack of bees, those crops, which are used as feed for dairy animals, may suffer.

"It affects the whole food chain right up the line," he said.

The provincial government has killed the hives in beeyards where the mite was found. Large areas around the Niagara Peninsula and Cornwall have been placed in quarantine, meaning bees in those areas are not shipped out. Beekeepers usually transport their bees across the province to pollinate fruit trees in various areas. The

provincial government has provided \$100,000 in compensation as part of a \$750,000 aid program for beekeepers, but Mr. Montoux said the compensation is minimal.

According to Jim Rainforth, secretary of the Ontario Tender Fruit Producers Marketing Board, beekeepers this season raised the price they charge fruit growers for use of the bees, an increase the farmers can ill afford.

"If a beekeeper agrees to bring a hive into a quarantined area, he has to leave it there," he said. "It's costing the fruit growers more to rent bees."

Mr. Montoux said the mites have also led to a shortage of bees for pollination.

Mr. McRory said the mites arrived in Texas via Mexico, and in Florida through an illegal shipment of bees. It has been illegal to import bees into North America since 1922. The mites quickly moved into other states.

The bees "are moved around the States by migratory beekeepers," he said. "When they're moving those bees around so much, they expose everyone to the problems. It wasn't long before these mites were spread all over the States."

Mr. McRory said beekeepers in Michigan and New York lost up to 80 percent of their bees this winter.

"There'll be a little handful of bees (alive in a hive), and all the other bees will be dead out in the snow."

No bees have been imported in Ontario since 1985. Mr. McRory said the mites were probably brought over by bees from Ontario criss-crossing the border into the United States, and attacking hives in New York. Strong colonies of honeybees attack weaker ones.

The government has set up three quarantine areas in Ontario, and will set up a fourth this week. All of the Niagara region is under quarantine, as is a large area around Cornwall, and a five kilometre radius around the town of Cardinal, 40 kilometres east of Cornwall. A quarantine will be set up around the northern town of New Liskard, where Niagara bees are used for pollination.

Mr. McRory said the problem is even worse in the Western provinces, where the borders were open until 1987.

Matters in Quebec are unclear, he said. But in the Maritimes Nova Scotia and Prince Edward Island have sealed their borders.

Mr. McRory said it appears that European bees, which have been exposed to the mites for much longer, have developed some sort of genetic immunity. The University of Guelph is importing some bees from Britain to see if that immunity can be bred into Canadian bees.

Menthol Vapor Control Method

54200030 Toronto *THE GLOBE AND MAIL*
in English 15 May 90 p A3

[Text] Guelph, Ont.—An associate professor at the University of Guelph says he has found a way to combat the mites that are endangering Ontario's honeybee colonies: menthol vapor.

Gard Otis, of the department of environmental biology, announced recently that he killed the mites by placing menthol crystals in the bee colonies.

Two kinds of mites—tracheal and varroa—are infesting the bees, Mr. Otis said. "The tracheal mites infest the bee's breathing system and the varroa mites feed on developing bees."

Mr. Otis said the only method now being used to control the mites is destruction of infected colonies. "To date, more than 800 colonies in the Niagara area have been eradicated, and I am afraid other beekeepers will lose their colonies this summer," he said.

The government is quarantining the Cornwall and Niagara areas, but infected bees continue to bring mites across the border from the United States.

The infestation could devastate Ontario's multimillion-dollar fruit tree industry, which depends on the bees for pollination.

Mr. Otis said the best solution to the problem would be to breed bees that are resistant to the mites.

"There are bees in Europe which are not affected by mites," he said.

Cadmium Mercury Found in Flesh of Arctic Whales

54200031 Toronto *THE GLOBE AND MAIL*
in English 26 May 90 pp A1, A6

[Article by Miro Cernetig]

[Excerpts] [Passage omitted]

Inuvik, NWT—A soon-to-be-published study obtained by *THE GLOBE AND MAIL* shows beluga across the Arctic have dramatically higher levels of the heavy metal cadmium in their bodies than even their beleaguered cousins to the south, the endangered beluga pods that range the polluted waters of the St. Lawrence River.

The new study, which also found that concentrations of mercury in Arctic beluga above federal safety guidelines, has the people of Canada's North—who eat the whale meat—worried about their own health, the well-being of the whales and the future of the northern environment itself. [Passage omitted]

Scientists agree that the study, recently completed by the Department of Fisheries and Oceans, is cause for concern. The first Arctic-wide examination of the beluga, it

found as much as 25 parts per million of cadmium in the whales' livers, 43 times the level measured in the St. Lawrence beluga. High levels of cadmium also were found in the belugas' kidneys and muscle tissue.

"It was a real surprise to me," said Rudolf Wagemann, the federal research scientist who carried out the study. "I'm not sure what the reasons for the high cadmium readings are. But it has to come from what the beluga are eating."

Little is known about the effects of cadmium, a common industrial pollutant, on marine and land mammals, Mr. Wagemann said. It has been associated with kidney failure, and small amounts of heavy metals in general have been linked to a wide variety of insidious health problems. Over time the metals accumulate to dangerous levels in the body.

"Even low exposure to some toxic metals can affect mammalian nervous systems, behavior and, in humans, learning ability, before any overt clinical symptoms appear," warns the study.

But though levels of cadmium in humans have quintupled over the last century because of industrial development, smoking and use of fertilizers, the federal government has yet to set any guideline for cadmium because experts consider the levels of the heavy metal in foods low. "We don't have a specific guideline for cadmium in food because it isn't felt there is a need," said John Salminen, head of the contaminants section for the health protection branch of Health and Welfare Canada.

For mercury, the best studied of heavy metals, Ottawa recommends that people not eat fish containing more than 0.5 parts per million. The new study shows that in virtually every part of the Arctic where whales were captured by native hunters, the average level of mercury in beluga muscle tissue exceeded that guideline, in one case more than doubled it.

Mr. Salminen said the Health Department was unaware of the findings and "will certainly be interested in seeing this study."

The results caught Ian Gilchrist, medical director for the Northwest Territories Health Department, by surprise. He said that although industrial contaminants are known to be cropping up in marine mammals, the nutritional value of indigenous foods still is thought to outweigh their dangers.

"It's our feeling at the moment that the benefits of eating country food like the beluga outweigh the health risks," he said. [Passage omitted]

Every summer in the Mackenzie Delta alone about 130 to 140 whales are killed, supplying about 3,000 Inuvialuit—Western Arctic Inuit—with muktuk, the northern delicacy that is as common in the North as steak is in the south. Most Inuvialuit households keep muktuk in big plastic buckets so that a year-round supply is available. [Passage omitted]

The beluga, which appear to be reproducing in strong numbers in most parts of the Arctic, live on marine organisms. But since the whales are migratory, little is known about where they feed or swim for most of the year.

It is impossible to pinpoint whether the beluga are picking up cadmium and mercury from specific polluted areas in the ocean, whether the pollution is simply widespread or whether the heavy metals occur naturally in the Arctic environment, said Mr. Wagemann.

But many believe the contaminants in the Arctic beluga, often called the canary of the sea because of its high-pitched warble, are simply another warning that mankind's environmental sins are having global repercussions.

"The beluga are telling us we are not taking care of them adequately," says Burton Ayles, the director of fisheries and habitat management at the Freshwater Institute in Winnipeg. "People shouldn't think just because they live in the North they are immune to pollution." [Passage omitted]

Numerous studies have shown conclusively that industrial poisons are being absorbed by the beluga and other northern mammals, including man. A recent study on Broughton Island in the Eastern Arctic found that levels of PCBs in blood and breast milk in the Inuit were higher than Health and Welfare considers tolerable. Other man-made chemicals such as pesticides and organochlorines have also begun showing up in the Arctic food chain.

GREECE

Hemorrhagic Fever Victims in Ioannina

90WE0223A Athens ETHNOS in Greek
17 May 90 p 17

[Article by Art Dhomenikos: "Killer Rats in Ioannina"]

[Excerpts] Killer rats are on the run and are killing people in the Ioannina region.

Ten people have already lost their lives from this rare disease—hemorrhagic fever—caused by rats.

The 10 deaths were acknowledged by the Ministry of Health through an announcement by the Public Health Directorate and through news reports about the latest death, that of An. Grantzos who died on 10 May.

From an epidemiological standpoint, hemorrhagic fever and the rats that cause it were first spotted at the end of 1986 by Mr. Khar. Moutsopoulos, professor at the University of Ioannina.

By October 1987, eight persons had already died, the latest being a 26-year old man from the town of Klei- donia, near Metsovo.

It should be mentioned that the main areas affected are Konitsa and Metsovo. [passage omitted]

Fatal cases of hemorrhagic fever have been observed in greater numbers in other Balkan states and Scandinavian countries.

Never has such a case been observed in cities of our country and never had the disease ever acquired epidemic proportions.

The Ministry of Health also pointed out that this disease is not transmitted from one person to another. It was also mentioned that the Ministry has for years put out bulletins providing provincial health departments with information and has made medical personnel aware of methods to confront this problem.

Disinfection procedures have already been put in place in Ioannina through the use of rat poison.

The unfortunate farmer who was the latest victim of this rare disease had gone hunting and it seems that he was infected by the food that he had hung up on a tree while he was out hunting. Rats had evidently "sampled" the food before he started eating.

We should point out that an investigation we conducted did not at all confirm yesterday's press reports according to which: 1) The rats in question were huge and yellow in color; and 2) their origin is Korean and that they came to Greece via Albania.

IRELAND

More 'Mad Cow Disease' Cases Found in Republic

54500091 Dublin *IRISH INDEPENDENT* in English
19 Apr 90 p 3

[Text] Several more cases of 'mad cow' disease—BSE [bovine spongiform encephalopathy]—have been discovered in this country in recent weeks. And Department of Agriculture experts are still baffled as to where it is coming from, writes Willie Dillon.

A total of 19 cases have now been confirmed, mostly in counties close to the Border. A further 12 animals have been destroyed because it was suspected that they might have had the disease.

The rise in the number of Irish BSE cases coincides with a continuing dramatic increase in Britain. Some 10 percent of UK farms are now infected and about 400 new cases a week are being confirmed, the ICOS 1992 conference in Dublin heard yesterday.

And up to 50 cases had been identified in the North.

Of the 19 cases so far confirmed in the Republic, there have been four each in Donegal and Cavan, three in Cork and one each in Monaghan, Meath, Longford, Carlow, Clare, Limerick, Tipperary and Waterford.

Farmers here are worried at the possible risks posed by cross-Border cattle smuggling for slaughtering. Since March 15, virtually all cattle exports from the UK to the rest of the EC have been banned because of the disease.

PORTUGAL

Measles Incidence Cited

90WE0222A Lisbon *DIARIO DE NOTICIAS*
in Portuguese 29 May 90 p 17

[Excerpt] A large number of Portuguese are still contracting measles, although vaccination is "effective and free," a public-health worker said yesterday, on the fifth Public Health Day.

Etelvina Cale based her statement on the results of a study conducted in two Lisbon districts in Santo Condestavel Parish. From a sample survey of children up to age 10 living in these districts and an analysis of measles trends from 1978 to 1989, it is seen that the incidence of measles came to about 26 percent in the 10 years of the study.

The incidence was higher for the older children, for whom the vaccination rate was 69 percent; the vaccination rate declines as the age of the children rises.

Vaccination was effective in 85 percent of the cases.

The Public Health Days were organized by the National School of Public Health.

Resurgence of Leishmaniasis

90WE0212A Lisbon *ESPRESSO* in Portuguese
26 May 90 pp 56R-60R

[Article by Rui Cardoso]

[Excerpt] After being almost banished in the 1950's, leishmaniasis is turning up again in Portugal. It is endemic in Alto Douro but is also showing up in Greater Lisbon, even in areas with a high per capita income. A procedure introduced by a Portuguese firm is aimed at helping to break the transmission cycle of the disease, which is caused by a parasite that lives mainly in dogs and is transmitted to humans through the bite of an insect known as the phlebotomus.

Its preferred victims are children under age five (and especially those under two). If not treated in time, the disease caused by the microorganism, a disease known by its Indian name of kala azar can be fatal. In Portugal, the death rate among infected children was 6.1 percent in 1983.

There has recently been an increase in the number of cases among adults. Because it is known that Leishmania grows by using the cells of the mammalian host's immune system, specialists have advanced the theory that this may be related to increased deficiencies in the

population's immune system. It is generally acknowledged that such deficiencies are caused by various factors, among them the improper use of medicines and infection by the AIDS virus.

Pedro Abranches of the Institute of Tropical Hygiene and Medicine told EXPRESSO: "Although leishmaniasis is a primary disease in children, it is an opportunistic infection in adults."

Crisis in 1950

The same researcher, who has been heading one of the two teams studying the development of the disease in Portugal, emphasizes a number of interesting aspects of its development. The first case to be documented in medical annals occurred in 1910 and involved a nine-year-old boy living in Lisbon. Until the 1950's, kala azar (especially the visceral variety) was a major public health problem. It has been a reportable disease since that time. The worst year was 1950, when there were 448 cases throughout the country, with the main focuses being Alcacer do Sal and Alto Douro.

As was more or less the case in the tropical countries, the launching of antimalaria campaigns (involving the widespread use of insecticides against the mosquitoes carrying that disease) resulted in the almost total eradication of leishmaniasis in Portugal. Only 20 cases were reported in 1970. Since then, the figures have risen again to stabilize at approximately 50 cases per year.

Douro Focus of Disease

Field studies have revealed that, although the disease has been eradicated in the Alcacer area, the focus in Alto Douro is still active. As a matter of fact, that is where 80 percent of all cases detected in the country occur.

A study of the Alto Douro area was begun in 1985 as part of an interdisciplinary project by teams from the Institute of Tropical Medicine in Lisbon and the Laboratory of Parasitology of the Ricardo Jorge National Institute of Health in Porto. Until that time, the number of cases in the region had averaged 36 per year.

According to physician Maria de Lurdes Sampaio, who is in charge of the team from the Ricardo Jorge Institute in Porto, analysis of the statistics leads to some interesting conclusions. For instance, the General Directorate of Primary Health Care recorded 69 cases in the northern region between 1984 and 1989 (in addition to 36 in the central region and 11 in the southern region). But the actual number of cases treated or diagnosed during that same period at hospitals in Porto (Maria Pia and Santo Antonio Hospitals) and Vila Real and at the Ricardo Jorge Institute totaled 124, or almost twice as many. That difference shows that many cases of kala azar are not reported to the general directorate, even though it has been a reportable disease since 1951.

Alijo Monitored

Because the municipality of Alijo was having the largest number of cases (17 percent of those occurring in the region), it was chosen as the site of a pilot study concerning the epidemiology and ecology of kala azar.

The incidence of the disease within the population is paralleled to some extent by the number of infected dogs. On average, about 10 percent of the dogs in the municipality can be expected to have parasites. It is in the extreme south—in the "hot country" between the Pinhao and Douro Rivers—that the climatic conditions appear to be most favorable to the development of the insects transmitting the disease. In the village of Vale de Mendiz, more than one-third of the dogs are infected, and, in one home, three generations of children have had kala azar.

The fact that there are localities with such high levels of infection and others right next door where such is not the case suggests that the disease is spread by a very definite pattern of infection: "The phlebotomus has a small flight range. Because of that, the usual thing is for us to find cases of infection concentrated in one spot alongside areas where no cases of infection are observed," said Pedro Abranches.

The fact is that, although the insect's bite can transmit the disease from dog to man, the reverse is not true: The source of infection in phlebotomines is the *Leishmania* present in the skin of animals in the most advanced stage of the disease. In human beings, except in the case of some cutaneous varieties of the disease, the parasite lodges in internal organs such as the spleen, putting it beyond the reach of insect bites.

While the focus in Alto Douro has remained active, that in Alcacer do Sal has been replaced by a new area. It is the area being studied by the team coordinated by Pedro Abranches, and it includes rural and suburban areas in the vicinity of Lisbon and Setubal.

Suburban Focus

The rural area coincides partly with the boundaries of the Arrabida Nature Park. The parasite's "reservoirs" are either domestic dogs or wild animals such as foxes. It is estimated that 8.8 percent of the dogs in the rural area around Setubal are infected, and that the figure rises to 10.9 percent in the area of the nature park. Sampling carried out with the help of hunters suggests that the rate of infection in the fox population totals about 5.6 percent.

But the incidence of the disease among humans is not what one might expect on the basis of those figures. In the rural area, the number of cases detected has not exceeded two over the past 10 years. The most plausible explanation is that human population density is low and that the insects find food sources other than (and presumably more attractive than) man.

On that subject, Mauricio Londner, a professor at Jerusalem University who was invited to attend the public presentation of the diagnostic kit, related an interesting incident in Israel. While conducting studies to determine why the incidence of leishmaniasis was completely different in settlements right next to each other, researchers discovered this: Turkeys were being raised in one of the villages, and apparently the blood of those birds had become the favorite food of phlebotomines. For reasons not completely understood, it turned out that, once the turkey blood was absorbed by the insects, it had the property of killing the parasites in their digestive tracts.

Homes in Estoril Not Safe, Either

Direct investigation in the Greater Lisbon area, coupled with reports from physicians and veterinarians alike, has led to the discovery of a new facet of the disease: It is spreading in suburban areas.

The disease is somewhat prevalent not only in the deteriorating neighborhoods of Loures and Setubal but also in residential districts along the Estoril line, with half a dozen cases being reported every year. Although there are fewer infected dogs in that area (on the order of 3.8 percent), the existence of truck gardens and garbage dumps in the one case and of poorly tended gardens and lawns in the other seems to provide an environment favorable to the proliferation of phlebotomines. In this specific case, human blood is an important food source.

Most cases of the disease show up at the beginning of each year, the reason being that infection occurs through bites by phlebotomines during the summer months, with the incubation period in humans lasting several months. The incubation period in dogs is much longer, a situation that causes problems in connection with both veterinary treatment (the results of treatment being considerably more uncertain in the case of animals) and public health that are difficult to solve. From that standpoint, the diagnostic kit may be of valuable help. [passage omitted]

Hydrellia Grissola Fly Affects Rice Crop

90WE0222B Lisbon DIARIO DE NOTICIASin Portuguese 30 May 90 p 23

[Text] A pesticide considered highly dangerous to bees, fish, and wildlife will be used in the Baixo Mondego to combat a plague of insects that is attacking the rice fields, it was announced by the emergency commission created to deal with the crisis.

The commission comprises representatives of the Ministries of Health and Agriculture, the Coordinating Commission for the Central Region, the AOP (Portuguese Rice Growers' Association), the Directorate of the Environment for the Central Region, and technicians of Bayer and SAPEC [expansion unknown].

The commission advised the farmers to use a dimethyl-based product, given the lack of an "alternative to the use of approved phytopharmaceutical products."

According to a communique from the commission, the use of the dimethoate should be "localized," and it should be applied using "sprayers hooked up to tractors or backpack sprayers (the equipment used to apply copper sulfate)."

When applying the product, the operators should use protective masks and avoid direct contact with the skin, the emergency commission also advises.

The possible use of aerial spraying to combat the *Hydrellia Griseola* fly should entail "the redoubled caution appropriate to this form of application in order to minimize the risk to the environment."

The commission notes that recourse to this method is "the technical responsibility of the firm that employs it."

Cattle should not be allowed in the treated area for at least two weeks following the spraying, the commission warns.

Several experts attribute the appearance of this fly and another pest, the red crayfish, in the Baixo Mondego rice paddies to a "serious ecological imbalance" in that region.

The National Association for the Conservation of Nature (QUERCUS) commented yesterday that the minister of the environment is "one of the seven pests of the Baixo Mondego" for allowing the aerial spraying of the rice paddies with a dangerous product to combat the *Hydrellia Griseola* fly, which is attacking the crops in the region.

QUERCUS is critical of the decision reached by the emergency commission appointed by Fernando Real, minister of the environment and natural resources, to deal with the situation in the Baixo Mondego.

According to the association, dimethoate is an insecticide for which the spray method of application is "technically contraindicated." It adds that the product is considered "extremely dangerous to humans, bees, fish, and wildlife."

Officials of the Directorate of the Environment for the Central Region and of the Regional Coordinating Commission have said that this product "is not approved for use in the rice paddies, much less for aerial spraying."

In its communique, QUERCUS declared that the minister of the environment and natural resources was revealed to be less conscientious than the growers in being "permissive regarding their intent" to use small planes to apply the dimethoate.

On the other hand, the association feels that the rice growers "have demonstrated a certain degree of ecological awareness" in demanding that the minister come up with a way to combat this pest that is attacking their crops.

UNITED KINGDOM

Incidence of Measles in Adults Expected To Double

54500088 London *THE DAILY TELEGRAPH*
in English 30 Apr 90 p 7

[Text] Measles, that traditional scourge of the school-room, is likely to become a bigger threat to adults, says a report.

Colleges and universities could become the prime spots for future outbreaks, says the Public Health Laboratory Service. The threat has arisen because of the success of immunization programmes in pre-school children.

Because about 80 percent of children are being immunized by the combined vaccine against measles, mumps and German measles, there is little natural vaccination brought about by repeated exposure to the infection.

Immunity may also decline with time, leaving adults relatively more vulnerable.

Public health doctors have been alerted by the service to a doubling within a few years in the number of adult cases compared with all cases in children. From 1980-82, 2.5 percent of measles cases were in people over 15, compared with 4.9 percent in 1986-88.

The service said that with greater uptake of vaccine an upward shift in the age distribution may be expected, resulting in outbreaks in colleges and universities. It added: "This has already been observed in the United States, where 95 percent of pre-school children are vaccinated."

Cases of measles, which are usually mild, but can cause death, brain damage, ear infections and pneumonia, are compared over a two-year period because the disease surges every other year.

Last year there were 26,180 cases, with six deaths, a record low. But in 1988 there were 86,001 case and 16 deaths.

A spokeswoman for the service said yesterday: "Although the total number of cases will decline, outbreaks may occur in clusters, for example in universities where people are living in close proximity, rather than as a continual background pattern."

The service had been making annual checks on 9,000 people who were vaccinated in 1964 and no significant fall in protection had been noted, the spokeswoman added. There were fewer than five cases a year in the test group, which were attributed to initial failure in the vaccine.

The measles, mumps and German measles vaccine, known as MMR, was introduced by Mrs Currie in October 1988 when she was junior health minister.

Experts say a 90 percent uptake is essential. Vaccine has been available since the 1960s, but uptake reached 70 percent only in 1988.

Study Shows Large Error in Leukemia Statistics

54500087 London *THE DAILY TELEGRAPH*
in English 10 May 90 p 5

[Article by Peter Pallot, Health Services Staff]

[Text] The number of leukemia cases is 60 percent higher than recorded by official sources, a five-year study concluded yesterday.

There were 5,000 new cases of leukemia a year in people up to 80 years old, about 2,000 more than recorded by the Office of Population Censuses and Surveys, Leeds University researchers disclosed.

The office collects data from cancer registers, which record details from death certificates and hospital records.

The university researchers worked solely from the notes of 300 specialists in diagnosing leukemia, giving a much more accurate picture, said Dr. Ray Cartwright, director of the Leukemia Research Fund's center for clinical epidemiology at Leeds.

In an examination of 12 types of leukemia in the regions surveyed—covering 15 million people—only one form of the malignancy clustered in geographical areas, he told a press conference at the Institute of Child Health.

Dr. Cartwright singled out Hodgkin's Disease—a cancer of the lymph glands—as clustering so strongly that it could not be accounted for by chance.

The other malignancies also occurred in geographical groups but the concentration was never greater than that which could be brought about by chance.

The cause of Hodgkin's Disease could be a virus, which might account for its patchy distribution, he said.

But the survey still found major differences in the rates of leukemia in different counties. The most striking of these was Somerset.

Taking all bone marrow cancers, Somerset was found to have 51 percent more cases than expected, followed by Gwent (28 percent) and South Glamorgan (24 percent).

In the lymph gland cancers, Somerset again headed the list, with an incidence 30 percent greater than average, followed by Devon (12 percent) and North Yorks (11 percent).

Yeovil, Somerset, had the highest rate for two of the major leukemias—chronic lymphoid and acute myeloid—of any district in England and Wales.

Nuclear plants were located in places with a relatively high incidence of leukemia, but with the exception of

Copeland, Cumbria, home of Sellafield, there was no evidence that the incidence was greater than might be expected.

Another theory was that Somerset's high rate might be caused by high levels of the naturally occurring radioactive gas radon.

The study found that most myeloid and many lymphoid leukemias occurred in greater than average numbers in parts of the South-West where radon levels were high.

However, Dr. Cartwright said radon was not the only possible explanation. Other theories included exposure to agricultural chemicals, viruses brought in by migrant workers and bracken. Bracken spores had been shown to produce tumors in animals.

The study had laid the ground for further intense research comparing areas of high and low rates of leukemia in order to find the reason for the differences he added.

Dr. Freda Alexander, senior research fellow at Leeds, said the links with radon were sufficient to warrant a Radiological Protection Board study.

Dr. Denis Hemshaw, of Bristol University, who last month gave details of a study which for the first time showed a link between radon and leukemia, said yesterday: "It is beyond reasonable doubt that there is a statistically significant association between radon and leukemia incidence."

Dr. Cameron Bowie, director of public health in Somerset, said no-one yet knew why the county had such a high incidence of cancers.

Research to establish a link between disease and the Hinkley Point nuclear plant at Bridgwater had drawn a blank and was now concentrating on other theories, including radon and the effect of viruses carried by migrant workers.

Another recent piece of research linking leukemia in children with exposure to radiation in their fathers was also being considered, Dr. Bowie added.

In leukemia, abnormal white cells in the blood multiply uncontrollably. Childhood leukemia accounts for 10 percent of cases and kills more children between the age of two and 15 than any other disease.